

Ciba

June 5, 2002

Mr. Frank Battaglia (2 copies)
USEPA Region I
Office of Site Remediation and Restoration (HBT)
JFK Federal Building
Boston, MA 02203

Re: Semiannual Monitoring Report for January – June 2002
Ciba Specialty Chemicals, 180 Mill Street, Cranston, RI 02905
EPA ID RID001194323

Dear Mr. Battaglia:

Ciba is pleased to submit the semiannual monitoring report for the Ciba Specialty Chemicals facility located at 180 Mill Street, Cranston, RI. The report covers the monitoring activities and the results of these activities that were performed at the facility in April 2002. These monitoring activities are described in the Pawtuxet River Corrective Measures Study (PRCMS) Report (Section 3.5.1, page 3-12) as submitted to the USEPA in August 1996.

The Groundwater Extraction and Treatment System is controlling releases to the Pawtuxet River while long-term corrective measures to SWMU-11 are addressed by the SVE system.

If you have questions or need additional information, please contact me at 732 914-2537 or fax 732 914-2909.

Sincerely,


Barry Cohen
Compliance Manager

c: Ms. Margaret Dein Bradley, RIDEM



REC'D

6-6-02

F.B.

SEMIANNUAL MONITORING REPORT

**CIBA-GEIGY FACILITY
180 MILL STREET
CRANSTON, RHODE ISLAND**

MONITORING RESULTS

JANUARY - JUNE 2002

**CIBA SPECIALTY CHEMICALS CORPORATION
TOMS RIVER, NEW JERSEY 08754**

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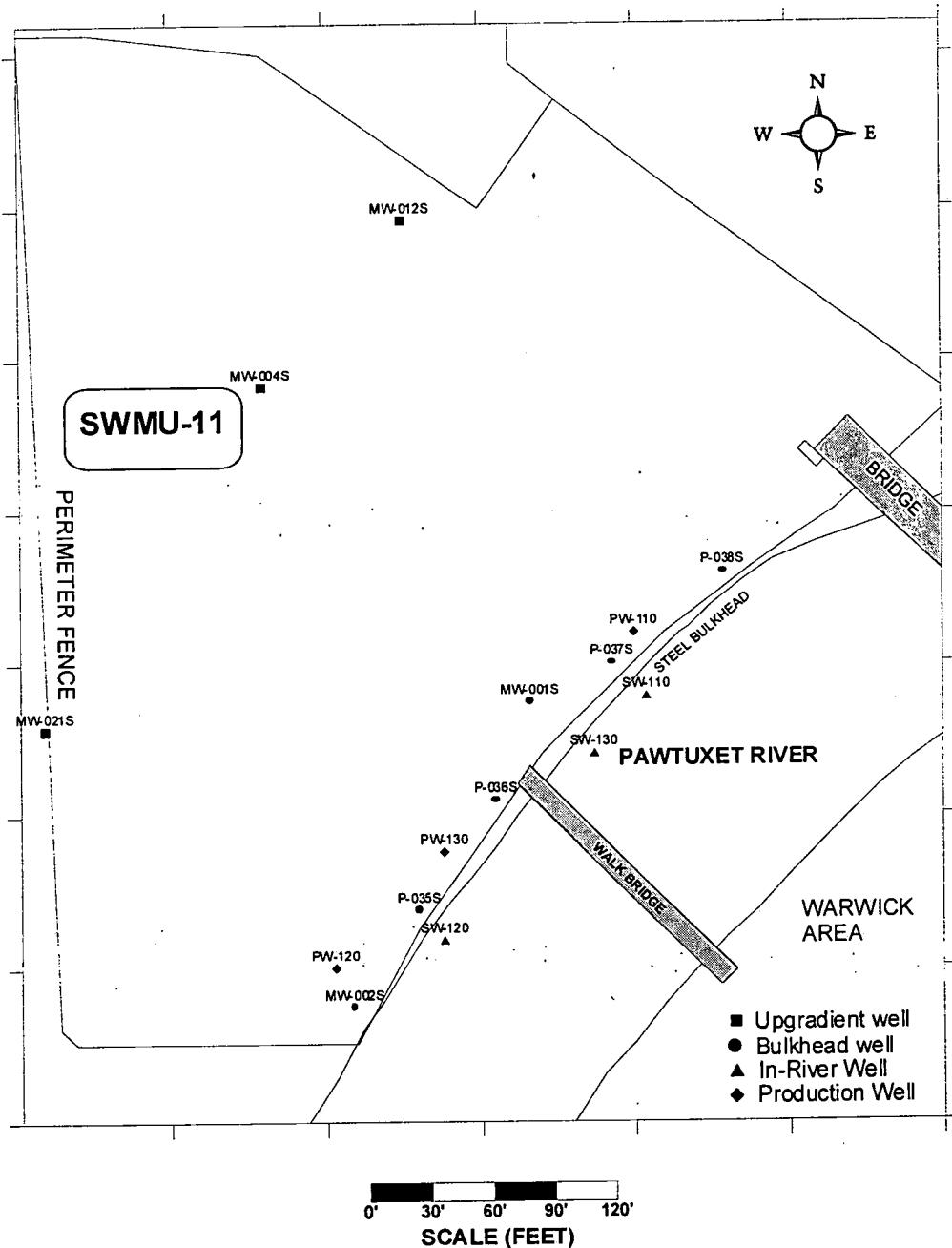
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WELL LOCATION MAP

CIBA SPECIALTY CHEMICALS CORPORATION (FORMERLY CIBA-GEIGY CORPORATION) CRANSTON, RI FACILITY FORMER PRODUCTION AREA

Chemical Well Monitoring Network



1.0 SUMMARY

On June 16, 1989, Ciba-Geigy Corporation (now Ciba Specialty Chemicals Corporation (Ciba)) entered into an Administrative Order on Consent (AOC) with the USEPA. The AOC required Ciba to conduct a Corrective Measures Study (CMS) and propose Media Protection Standards (MPSs) for the former manufacturing facility at Cranston, RI (the Facility). MPSs for five chemicals of concern (COC) were developed (see Table 1) and are monitored at 12 wells two times a year.

The first 2002 semiannual monitoring episode was performed on April 4-5, at which time 12 monitor wells and 3 extraction wells were sampled and analyzed by Rhode Island Analytical for a suite of chemicals including the COC. Semiannual water level readings were recorded on April 16, 2002.

A third extraction well, PW-130, began operating on December 20, 1999. The new well complements the two existing extraction wells to achieve hydraulic capture of the plume along the bulkhead in the former Production area. The potentiometric surface map (Figure 2, Appendix A) for April 16, 2002, demonstrates capture along the entire bulkhead.

When two of the three extraction wells experienced a decrease in capacity over time Ciba contracted to have the well header piping replaced in the month of July 2001. Later the same year well rehabilitation for PW-110 and PW-130 were performed in December 2001, using the AQUA FREED® process. The results of these combined efforts appear successful and are being further evaluated.

The results of the April 2002, sampling show 1,2-dichlorobenzene and chlorobenzene exceeding the MPS in two wells along the bulkhead (see Table 2). These results are comparable to the last sampling of October 2001 when the same wells along the bulkhead showed similar contamination.

The two contaminated wells along the bulkhead that exceed the MPS are MW-002S and P-035S. These two wells located at the southern end of the bulkhead have experienced increases in contamination of chlorinated aromatics since the last half of 1999. As of December 1999, Ciba placed into service a new extraction well PW-130, which may be influencing the amount of contamination passing by these two monitor wells as groundwater flux moves toward PW-130. Extraction well PW-130 pumps on average 23 GPM versus the 3 GPM for next nearest extraction well PW-120 and is within 100 feet of these two monitor wells.

O-chlorotoluene contamination generally present in two of the upgradient wells has diminished over the last 6 years of monitoring. The same observation cannot be made for the monitor wells

along the bulkhead. The o-chlorotoluene is present in the SWMU-11 area where vapor extraction wells are generally high in o-chlorotoluene reaching as much as 88,000-ppb. At present o-chlorotoluene is in remediation by the SVE at SWMU-11.

Hydraulic capture of contaminated water to the Pawtuxet River is achieved by the three extraction wells and can be viewed in Figure 2, Appendix A.

The next monitoring episode is planned for September 2002.

2.0 OBJECTIVE

The objective of the monitoring program is to evaluate the Groundwater Extraction and Treatment System (GETS) on controlling releases to the Pawtuxet River while long-term corrective measures to areas of concern are being addressed, specifically SWMU-11.

3.0 INTRODUCTION

In August 1996, Ciba submitted to the USEPA a Pawtuxet River Corrective Measures Study (PRCMS) Report. In the PRCMS report (Section 3.5.1, page 3-12) Ciba proposed to measure groundwater elevations in the former Production area quarterly during the first two years following startup of the groundwater capture system and then semiannually until the groundwater capture and pretreatment system were shutdown.

Therefore, groundwater elevation data is collected from 23 wells to show if shallow contaminated groundwater in the former Production area is hydraulically controlled from discharging into the Pawtuxet River.

Inclusive of the PRCMS Ciba also proposed to monitor groundwater quality at the Facility. Groundwater is sampled semiannually from 12 selected overburden-monitor wells to evaluate changes in groundwater quality, specifically in the 5 chemicals of concern.

4.0 MEDIA PROTECTION STANDARDS

During the RCRA Facility investigation an MPS¹ was developed for each of five chemical contaminants detected in the former Production area groundwater. These contaminants and

¹ From the Public Health and Environmental Risk Evaluation (PHERE) that concluded the sole receptor impacted by contaminated groundwater were benthic invertebrates in the shallow sediments of the Pawtuxet River.

their respective MPSs are summarized in Table 1 and discussed in detail in the PRCMS Report, Section 2.4.1.

Table 1
Media Protection Standards
of Chemical Of Concern
CIBA-GEIGY, Cranston R.I. Facility
Former Production Area

Compound	MPS Concentration (ppb)
1,2-dichlorobenzene	94
chlorobenzene	1700
ortho-chlorotoluene	1500
toluene	1700*
xylenes	76

* Rhode Island Groundwater Objective GB - Groundwater classified as GB has been designated by the Rhode Island Department of Environmental Management (RIDEM) as not suitable for public or private drinking water use.

5.0 SEMIANNUAL MONITORING RESULTS

This report summarizes the groundwater quality results for the COC sampling that was performed April 4-5, 2002. The COC data are compared to previous sampling rounds dating back to March 1996, when semiannual monitoring activities were initiated. Also in this report are results of the hydraulic monitoring performed on April 16, 2002. The current hydraulic results are compared to pre-pumping baseline conditions dated September 30, 1993 (see Appendix A).

5.1 Hydraulic Monitoring

Piezometric contours for the overburden aquifer were created using data collected on April 16, 2002, from 23 groundwater monitor wells and 3 extraction wells using Golden Software, Inc., SURFER FOR WINDOWS, Version 5.01 software.

The tabulated groundwater elevation data and the associated potentiometric contours, Figures 1 and 2, are included in Appendix A.

The extended draught in the northeast resulted in two of the monitor wells to show "mud" when water levels were recorded. The overall effect of the draught was a reduced drawdown along the bulkhead.

The kriging contour algorithm was used as a best fit method of approximating the directional groundwater flow pattern. The baseline results in Figure 1 show groundwater flow from northwest to southeast to the Pawtuxet River. Figure 2 shows the effect of the 3 extraction wells on the groundwater flow. Well PW-110 north of the walk bridge shows groundwater capture at present pumping capacity² 37 GPM; the second and third extraction wells, PW-120 (2 GPM) and PW-130 (20 GPM), are capturing the plume along the bulkhead south of the walk bridge. Together the 3 wells are capturing the groundwater plume that would otherwise pass by the bulkhead to the Pawtuxet River.

The hydraulic capture along the bulkhead is discussed in detail in the report "Capture Zone Analysis, Former Production area, Cranston, Rhode Island" dated July 7, 2000.

5.2 Monitoring for Chemicals of Concern (COC)

Twelve wells were sampled as part of the semiannual sampling episode. The wells are divided into three main groups; shown on the Location Map in Section iii of this report. The COC analytical results are tabulated and included in Table 2 at the end of this section.

Three wells, MW-004S, 012S, and 021S are designated upgradient to the bulkhead wells. Except for the presence of o-chlorotoluene at well MW-021S the three upgradient wells show no COC contaminants. This is an improvement over past sampling episodes when 2 of the 3 wells would show o-chlorotoluene and xylenes albeit at low concentrations. Upgradient well MW-004S has continued to improve over the last three years and this improvement may be attributed to the SVE system now operating within the upgradient area of SWMU-11. The 3 wells continue to be acceptable for background comparisons.

Results for the 6 bulkhead wells show the presence of varying levels of all COC contaminants. Chlorobenzene and 1,2-dichlorobenzene are pronounced at bulkhead wells P-035S and MW-002S where both contaminants continue to be present in the ppm range and exceed the MPSs. Increase contamination at well P-035S was first observed in April 2000 and followed the introduction of the new extraction well PW-130 in December 1999. It would appear that contaminants are part of a slug of material passing by the well and over time should decrease. This same observation can be made for well MW-002S, see Appendix D, Table 4. The "P" wells, 036S, 037S, and, 038S north of the walk-bridge have not changed much over the past 5 years. Chlorobenzene remains prominent for these wells except in P-038S where low single digit to non-detect results for most COCs are typical.

² Pumping rates were taken the same day as the water levels, October 16, 2001.

The In-River wells are located beyond the bulkhead in the Pawtuxet River. Two wells were found to have low concentrations of chlorobenzene. Well SW-120 shows a presence of chlorobenzene at 39 ppb a result typical for this well when viewed over the past 6 years of monitoring. Well SW-110 has 2 ppb of chlorobenzene and the presence of this contaminant at low levels is a considerable improvement over the years when chlorobenzene would be in the 1-2 ppm range. For 2001 through the present the In-River wells have remained almost free of contamination a reflection of the success of the GETS.

Table 2

Monitoring Results for April 4-5, 2002
Chemicals Of Concern
(as ppb)

Well Designation	Well Number	MPS	94 1,2-Dichloro-Benzene	1700 Chloro-Benzene	1500 o-Chloro-Toluene	1700 Toluene	76 Xylenes
Upgradient	MW-004S		1 U	1	1 U	1 U	1 U
	MW-012S		1 U	1 U	1 U	1 U	1 U
	MW-021S		10 U	10 U	420	10 U	10 U
Bulkhead	MW-001S		10 U	1700	10 U	10 U	10 U
	MW-002S		360	4700	100 U	230	50 U
	P-035S		9600	8800	380	100 U	50 U
	P-036S		1 U	230	1 U	1	1 U
	P-037S		10 U	360	10 U	10 U	10 U
	P-038S		1 U	2	1 U	1 U	1 U
In-River	SW-110		1 U	2	1 U	1 U	1 U
	SW-120		1 U	39	1 U	1 U	1 U
	SW-130		1 U	1 U	1 U	1 U	1 U
Extraction	PW-110		1 U	26	14	1 U	2
	PW-120		320	660	170	28	10 U
	PW-130		320	670	170	28	10 U

U = Nondetect with detection limit given

J = Estimated value

MPS Exceedance

6.0 DISCUSSION

The April 2002 Certificate of Analysis by R.I. Analytical is included in Appendix B. The cumulative results from 1996 to the present for 12 wells and 5 COC are included as Tables 3, 4, and 5 in Appendices C, D, and E respectively. The cumulative results of each COC are plotted as Time-Series graphs for a better perception of trends, if any, over the sampling history since the inception of the GETS in September 1995. These graphs are also found in the respective Appendices C, D, and E.

Comprehensive trends in concentration are not apparent at 4 of the 6 bulkhead wells (Appendix D). However, as mentioned in Section 5.2, bulkhead wells P-035S and MW-002S exceed the MPS values for 1,2-dichlorobenzene and chlorobenzene, and these concentrations appear to have increased since 1999. These increases are indirectly attributed to the effects of the new extraction well PW-130 that went into operation in 1999.

The 3 In-River wells (Appendix E) are generally low to non-detect for contamination. These wells located beyond the bulkhead in the Pawtuxet River have consistently shown improvement since Ciba began the operation of the GETS.

7.0 CONCLUSION

Groundwater quality in the former Production area continues to improve over time. Groundwater quality as measured by an exceedance of the MPSs of the selected COC remains under pressure due to the presence of 1,2-dichlorobenzene and chlorobenzene. This latest sampling episode identified two wells along the bulkhead having contamination that exceeds the proposed media protection standards for 1,2-dichlorobenzene and chlorobenzene. These two wells may be experiencing the increased presence of contaminants due to the operation of a new purge that places the wells between the purge well and the captured contaminants.

Ciba has upgraded the extraction system piping and performed pump maintenance, as well as, reconditioned two of the three extraction wells. These improvements insure that the established hydraulic capture and treatment of contaminated groundwater is maintained. This capture can be viewed in Figure 2, Appendix A.

The next well sampling is scheduled for September 2002.

APPENDIX A

TABULATED

GROUNDWATER ELEVATION DATA

AND

POTENTIOMETRIC CONTOURS

CIBA SPECIALTY CHEMICALS CORPORATION
(FORMERLY CIBA-GEIGY CORPORATION)
180 MILL STREET
CRANSTON, RI

GROUNDWATER MONITORING

April 16, 2002 September 30, 1993

MONITORING WELL	TOC MSL FEET	TOC TO WATER FEET	GW ELEVATION MSL FEET	GW ELEVATION MSL FEET
PW-110	15.72	22.50	-0.48	NA
PW-120	14.25	15.92	3.54	NA
PW-130	16.59	20.85	-2.01	NA
MW-001S	15.04	6.61	6.93	9.39
MW-002S	14.46	5.52	6.35	9.21
MW-003S	16.61	6.68	8.56	7.96
MW-004S	21.29	9.55	9.79	10.72
MW-010S	22.62	9.86	10.96	11.34
MW-012S	22.54	10.22	10.63	10.54
MW-013S	18.44	7.85	11.79	9.83
MW-020S	21.94	8.98	11.13	11.53
MW-022S	16.87	5.85	8.96	9.63
MW-023S	20.71	mud	mud	9.41
MW-024S	21.04	mud	mud	10.89
MW-034S	18.85	7.01	10.06	10.4
P-001S	16.41	8.42	6.73	9.17
P-002S	13.85	5.31	6.60	8.38
P-003S	15.45	6.93	7.31	7.09
P-004S	19.92	7.31	10.97	11.07
P-005S	21.18	10.43	9.84	10.68
P-006S	23.62	11.51	12.52	10.39
P-034S	17.15	8.78	9.49	10.12
P-035S	15.32	7.40	5.96	8.51
P-036S	15.91	7.62	6.16	8.62
P-037S	15.69	8.70	5.91	8.96
P-038S	16.19	6.71	7.96	8.74

NA - Not Available

Figure 1

CIBA SPECIALTY CHEMICALS CORPORATION
CRANSTON, RI FACILITY
FORMER PRODUCTION AREA

Pre-Pump & Treat Potentiometric Surface Map
September 30, 1993

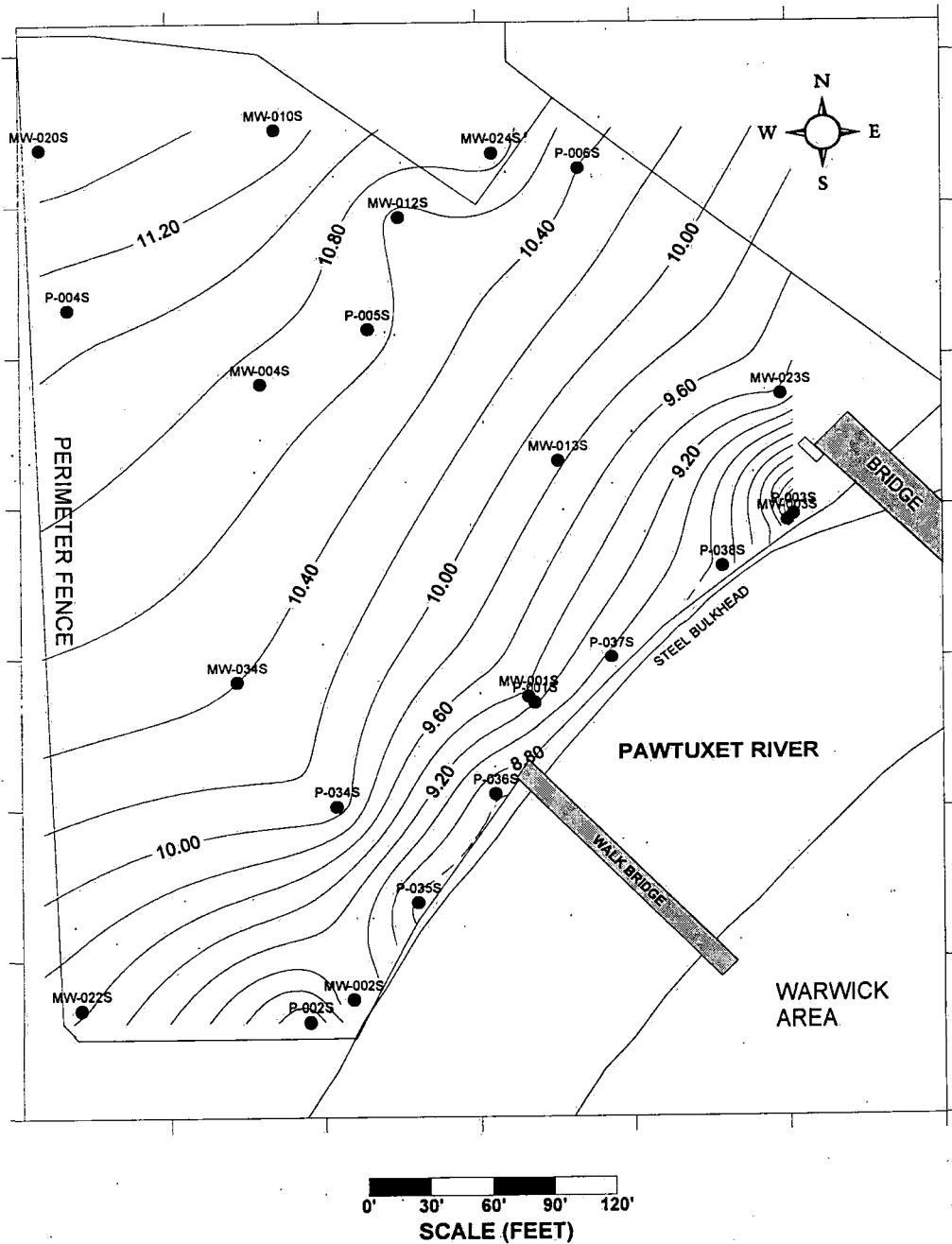
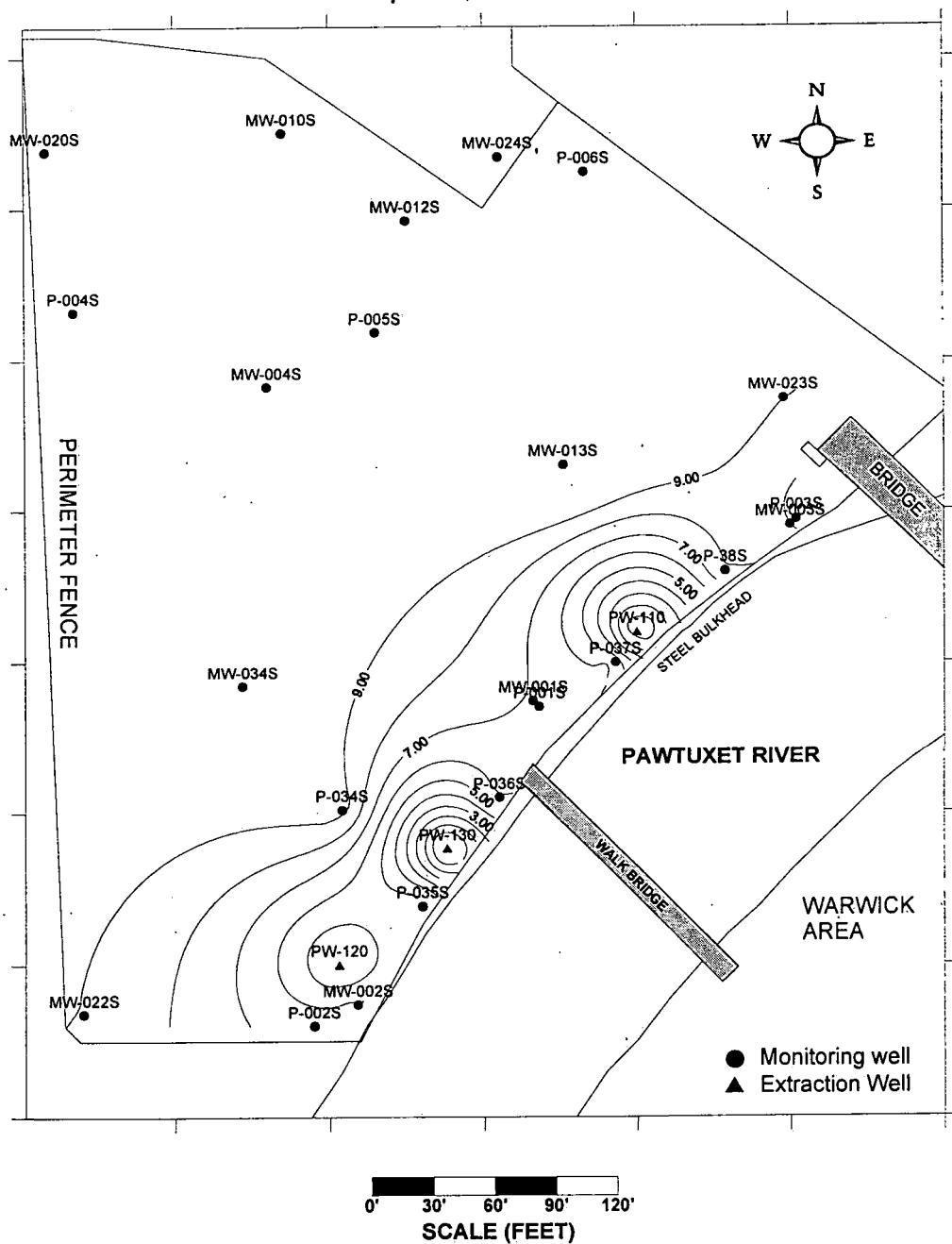


Figure 2

**CIBA SPECIALTY CHEMICALS CORPORATION
CRANSTON, RI FACILITY
FORMER PRODUCTION AREA**

**Potentiometric Surface Map
April 16, 2002**



APPENDIX B

CERTIFICATE OF ANALYSIS

R. I. ANALYTICAL



R.I. Analytical

Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
Attn: Mr. Barry Cohen
180 Mill Street
Cranston, RI 02905

Date Received: 4/05/02
Date Reported: 4/16/02
P.O. #: T0091717
Work Order #: 0204-04119

DESCRIPTION: CIBA GEIGY, MILL STREET MW'S (SAMPLED BY RIAL PERSONNEL)

Subject sample(s) has/have been analyzed by our laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies. The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844, NY-11726

If you have any questions regarding this work, or if we may be of further assistance, please contact us.

Approved by:

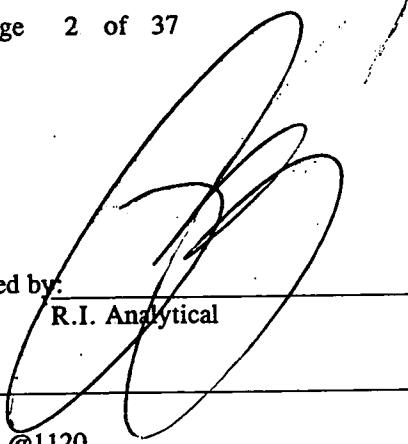
Paul Ferrotti
Data Reporting Manager

c: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by:

 R.I. Analytical

Sample #: 001

SAMPLE DESCRIPTION: PW-110 PUMP HOUSE GRAB 04/04/02 @1120

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.5		SU	EPA 150.1	4/04/02 11:20	JEC
TEMPERATURE (field)	60		F	EPA 170.1	4/04/02 11:20	JEC
SPECIFIC CONDUCTANCE	320	1	uMHOS/CM	EPA 120.1	4/04/02 11:20	JEC
Dissolved Oxygen	<1.0	1.0	mg/l	EPA 360.1	4/04/02 11:20	JEC
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/12/02 20:20	BML
Bromomethane	<10	10	ug/l	8260	4/12/02 20:20	BML
vinyl chloride	<1	1	ug/l	8260	4/12/02 20:20	BML
chlorodifluoromethane	<10	10	ug/l	8260	4/12/02 20:20	BML
chloroethane	<10	10	ug/l	8260	4/12/02 20:20	BML
methylene chloride	<5	5	ug/l	8260	4/12/02 20:20	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/12/02 20:20	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/12/02 20:20	BML
1,1-dichloroethane	<1	1	ug/l	8260	4/12/02 20:20	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/12/02 20:20	BML
chloroform	<1	1	ug/l	8260	4/12/02 20:20	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/12/02 20:20	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/12/02 20:20	BML
carbon tetrachloride	<1	1	ug/l	8260	4/12/02 20:20	BML
Bromodichloromethane	<1	1	ug/l	8260	4/12/02 20:20	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/12/02 20:20	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 20:20	BML
Trichloroethylene	1	1	ug/l	8260	4/12/02 20:20	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 20:20	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/12/02 20:20	BML
Dibromochloromethane	<1	1	ug/l	8260	4/12/02 20:20	BML
Bromoform	<1	1	ug/l	8260	4/12/02 20:20	BML
Tetrachloroethylene	1	1	ug/l	8260	4/12/02 20:20	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/12/02 20:20	BML
Chlorobenzene	26	1	ug/l	8260	4/12/02 20:20	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/12/02 20:20	BML
Benzene	1	1	ug/l	8260	4/12/02 20:20	BML
toluene	<1	1	ug/l	8260	4/12/02 20:20	BML
ethylbenzene	<1	1	ug/l	8260	4/12/02 20:20	BML
xylenes(Total)	2	1	ug/l	8260	4/12/02 20:20	BML
acetone	<10	10	ug/l	8260	4/12/02 20:20	BML
Carbon disulfide	<5	5	ug/l	8260	4/12/02 20:20	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/12/02 20:20	BML
vinyl acetate	<50	50	ug/l	8260	4/12/02 20:20	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 001

PW-110 PUMP HOUSE GRAB 04/04/02 @1120

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/12/02 20:20	BML
2-hexanone	<50	50	ug/l	8260	4/12/02 20:20	BML
Styrene	<1	1	ug/l	8260	4/12/02 20:20	BML
o-chlorotoluene	14	1	ug/l	8260	4/12/02 20:20	BML
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 20:20	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 20:20	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 20:20	BML
Surrogates		RANGE		8260	4/12/02 20:20	BML
Dibromofluoromethane	106	86-118%		8260	4/12/02 20:20	BML
-Bromofluorobenzene	99	86-115%		8260	4/12/02 20:20	BML
Toluene-D8	102	88-110%		8260	4/12/02 20:20	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 002

SAMPLE DESCRIPTION: MW-001S GRAB 04/04/02 @1140

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	7.0		SU	EPA 150.1	4/04/02 11:40	JEC
TEMPERATURE (field)	59		F	EPA 170.1	4/04/02 11:40	JEC
SPECIFIC CONDUCTANCE	798	1	µMHOS/CM	EPA 120.1	4/04/02 11:40	JEC
Dissolved Oxygen	1.8	1.0	mg/l	EPA 360.1	4/04/02 11:40	JEC
Volatile Organic Compounds						
chloromethane	<100	100	ug/l	8260	4/12/02 20:53	BML
Bromomethane	<100	100	ug/l	8260	4/12/02 20:53	BML
vinyl chloride	<10	10	ug/l	8260	4/12/02 20:53	BML
chlorodifluoromethane	<100	100	ug/l	8260	4/12/02 20:53	BML
chloroethane	<100	100	ug/l	8260	4/12/02 20:53	BML
methylene chloride	<50	50	ug/l	8260	4/12/02 20:53	BML
trichlorofluoromethane	<10	10	ug/l	8260	4/12/02 20:53	BML
1,1-dichloroethylene	<10	10	ug/l	8260	4/12/02 20:53	BML
1,1-dichloroethane	<10	10	ug/l	8260	4/12/02 20:53	BML
trans-1,2-Dichloroethylene	<10	10	ug/l	8260	4/12/02 20:53	BML
chloroform	<10	10	ug/l	8260	4/12/02 20:53	BML
1,2-dichloroethane	<10	10	ug/l	8260	4/12/02 20:53	BML
1,1,1-Trichloroethane	<10	10	ug/l	8260	4/12/02 20:53	BML
carbon tetrachloride	<10	10	ug/l	8260	4/12/02 20:53	BML
Bromodichloromethane	<10	10	ug/l	8260	4/12/02 20:53	BML
1,2-dichloropropane	<10	10	ug/l	8260	4/12/02 20:53	BML
cis-1,3-Dichloropropylene	<10	10	ug/l	8260	4/12/02 20:53	BML
Trichloroethylene	<10	10	ug/l	8260	4/12/02 20:53	BML
trans-1,3-Dichloropropylene	<10	10	ug/l	8260	4/12/02 20:53	BML
1,1,2-Trichloroethane	<10	10	ug/l	8260	4/12/02 20:53	BML
Dibromochloromethane	<10	10	ug/l	8260	4/12/02 20:53	BML
Bromoform	<10	10	ug/l	8260	4/12/02 20:53	BML
Tetrachloroethylene	<10	10	ug/l	8260	4/12/02 20:53	BML
1,1,2,2-Tetrachloroethane	<10	10	ug/l	8260	4/12/02 20:53	BML
Chlorobenzene	1700	10	ug/l	8260	4/12/02 20:53	BML
2-chloroethyl vinyl ether	<20	20	ug/l	8260	4/12/02 20:53	BML
Benzene	<10	10	ug/l	8260	4/12/02 20:53	BML
toluene	<10	10	ug/l	8260	4/12/02 20:53	BML
ethylbenzene	<10	10	ug/l	8260	4/12/02 20:53	BML
xylenes(Total)	<10	10	ug/l	8260	4/12/02 20:53	BML
acetone	<100	100	ug/l	8260	4/12/02 20:53	BML
Carbon disulfide	<50	50	ug/l	8260	4/12/02 20:53	BML
2-butanone(MEK)	<100	100	ug/l	8260	4/12/02 20:53	BML
vinyl acetate	<500	500	ug/l	8260	4/12/02 20:53	BML

R.I. Analytical Laboratories, Inc.

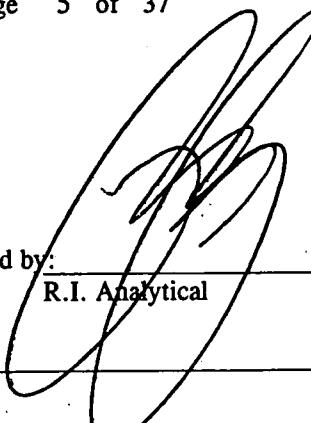
CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:


R.I. Analytical

Sample #: 002

MW-001S GRAB 04/04/02 @1140

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<500	500	ug/l	8260	4/12/02 20:53	BML
2-hexanone	<500	500	ug/l	8260	4/12/02 20:53	BML
Styrene	<10	10	ug/l	8260	4/12/02 20:53	BML
o-chlorotoluene	<10	10	ug/l	8260	4/12/02 20:53	BML
1,2-Dichlorobenzene	<10	10	ug/l	8260	4/12/02 20:53	BML
1,3-Dichlorobenzene	<10	10	ug/l	8260	4/12/02 20:53	BML
1,4-Dichlorobenzene	<10	10	ug/l	8260	4/12/02 20:53	BML
Surrogates		RANGE		8260	4/12/02 20:53	BML
Dibromofluoromethane	106		86-118%	8260	4/12/02 20:53	BML
4-Bromofluorobenzene	99		86-115%	8260	4/12/02 20:53	BML
Toluene-D8	103		88-110%	8260	4/12/02 20:53	BML

Detection limits increased as a result of sample dilution. Sample dilution required to achieve target compound response within the calibration range of the analysis.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 003

SAMPLE DESCRIPTION: SW-130 GRAB 04/04/02 @1152

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.6		SU	EPA 150.1	4/04/02 11:52	JEC
TEMPERATURE (field)	62		F	EPA 170.1	4/04/02 11:52	JEC
SPECIFIC CONDUCTANCE	279	1	uMHOS/CM	EPA 120.1	4/04/02 11:52	JEC
Dissolved Oxygen	1.3	1.0	mg/l	EPA 360.1	4/04/02 11:52	JEC
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/12/02 21:25	BML
Bromomethane	<10	10	ug/l	8260	4/12/02 21:25	BML
vinyl chloride	<1	1	ug/l	8260	4/12/02 21:25	BML
1-chlorodifluoromethane	<10	10	ug/l	8260	4/12/02 21:25	BML
chloroethane	<10	10	ug/l	8260	4/12/02 21:25	BML
methylene chloride	<5	5	ug/l	8260	4/12/02 21:25	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/12/02 21:25	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/12/02 21:25	BML
1,1-dichloroethane	<1	1	ug/l	8260	4/12/02 21:25	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/12/02 21:25	BML
chloroform	<1	1	ug/l	8260	4/12/02 21:25	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/12/02 21:25	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/12/02 21:25	BML
carbon tetrachloride	<1	1	ug/l	8260	4/12/02 21:25	BML
Bromodichloromethane	<1	1	ug/l	8260	4/12/02 21:25	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/12/02 21:25	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 21:25	BML
Trichloroethylene	<1	1	ug/l	8260	4/12/02 21:25	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 21:25	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/12/02 21:25	BML
Dibromochloromethane	<1	1	ug/l	8260	4/12/02 21:25	BML
Bromoform	<1	1	ug/l	8260	4/12/02 21:25	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/12/02 21:25	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/12/02 21:25	BML
Chlorobenzene	<1	1	ug/l	8260	4/12/02 21:25	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/12/02 21:25	BML
Benzene	<1	1	ug/l	8260	4/12/02 21:25	BML
toluene	<1	1	ug/l	8260	4/12/02 21:25	BML
ethylbenzene	<1	1	ug/l	8260	4/12/02 21:25	BML
xylenes(Total)	<1	1	ug/l	8260	4/12/02 21:25	BML
acetone	<10	10	ug/l	8260	4/12/02 21:25	BML
Carbon disulfide	<5	5	ug/l	8260	4/12/02 21:25	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/12/02 21:25	BML
vinyl acetate	<50	50	ug/l	8260	4/12/02 21:25	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 003

SW-130 GRAB 04/04/02 @1152

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/12/02 21:25	BML
2-hexanone	<50	50	ug/l	8260	4/12/02 21:25	BML
Styrene	<1	1	ug/l	8260	4/12/02 21:25	BML
o-chlorotoluene	<1	1	ug/l	8260	4/12/02 21:25	BML
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 21:25	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 21:25	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 21:25	BML
Surrogates			RANGE	8260	4/12/02 21:25	BML
Dibromofluoromethane	100		86-118%	8260	4/12/02 21:25	BML
Bromofluorobenzene	100		86-115%	8260	4/12/02 21:25	BML
Toluene-D8	102		88-110%	8260	4/12/02 21:25	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 004

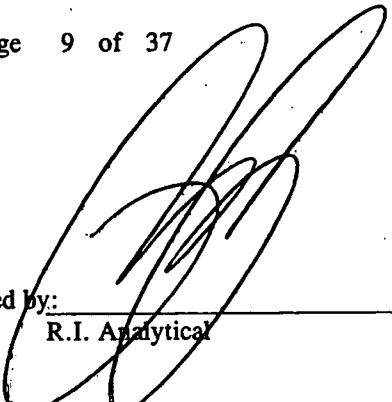
SAMPLE DESCRIPTION: P-37S GRAB 04/04/02 @1231

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	7.1		SU	EPA 150.1	4/04/02 12:31	JEC
TEMPERATURE (field)	60		F	EPA 170.1	4/04/02 12:31	JEC
SPECIFIC CONDUCTANCE	482	1	µMHOS/CM	EPA 120.1	4/04/02 12:31	JEC
Dissolved Oxygen	1.8	1.0	mg/l	EPA 360.1	4/04/02 12:31	JEC
Volatile Organic Compounds						
chloromethane	<100	100	ug/l	8260	4/12/02 21:57	BML
Bromomethane	<100	100	ug/l	8260	4/12/02 21:57	BML
vinyl chloride	<10	10	ug/l	8260	4/12/02 21:57	BML
trichlorodifluoromethane	<100	100	ug/l	8260	4/12/02 21:57	BML
chloroethane	<100	100	ug/l	8260	4/12/02 21:57	BML
methylene chloride	<50	50	ug/l	8260	4/12/02 21:57	BML
trichlorofluoromethane	<10	10	ug/l	8260	4/12/02 21:57	BML
1,1-dichloroethylene	<10	10	ug/l	8260	4/12/02 21:57	BML
1,1-dichloroethane	<10	10	ug/l	8260	4/12/02 21:57	BML
trans-1,2-Dichloroethylene	<10	10	ug/l	8260	4/12/02 21:57	BML
chloroform	<10	10	ug/l	8260	4/12/02 21:57	BML
1,2-dichloroethane	<10	10	ug/l	8260	4/12/02 21:57	BML
1,1,1-Trichloroethane	<10	10	ug/l	8260	4/12/02 21:57	BML
carbon tetrachloride	<10	10	ug/l	8260	4/12/02 21:57	BML
Bromodichloromethane	<10	10	ug/l	8260	4/12/02 21:57	BML
1,2-dichloropropane	<10	10	ug/l	8260	4/12/02 21:57	BML
cis-1,3-Dichloropropylene	<10	10	ug/l	8260	4/12/02 21:57	BML
Trichloroethylene	<10	10	ug/l	8260	4/12/02 21:57	BML
trans-1,3-Dichloropropylene	<10	10	ug/l	8260	4/12/02 21:57	BML
1,1,2-Trichloroethane	<10	10	ug/l	8260	4/12/02 21:57	BML
Dibromochloromethane	<10	10	ug/l	8260	4/12/02 21:57	BML
Bromoform	<10	10	ug/l	8260	4/12/02 21:57	BML
Tetrachloroethylene	<10	10	ug/l	8260	4/12/02 21:57	BML
1,1,2,2-Tetrachloroethane	<10	10	ug/l	8260	4/12/02 21:57	BML
Chlorobenzene	360	10	ug/l	8260	4/12/02 21:57	BML
2-chloroethyl vinyl ether	<20	20	ug/l	8260	4/12/02 21:57	BML
Benzene	<10	10	ug/l	8260	4/12/02 21:57	BML
toluene	<10	10	ug/l	8260	4/12/02 21:57	BML
ethylbenzene	<10	10	ug/l	8260	4/12/02 21:57	BML
styrenes(Total)	<10	10	ug/l	8260	4/12/02 21:57	BML
acetone	<100	100	ug/l	8260	4/12/02 21:57	BML
Carbon disulfide	<50	50	ug/l	8260	4/12/02 21:57	BML
2-butanone(MEK)	<100	100	ug/l	8260	4/12/02 21:57	BML
vinyl acetate	<500	500	ug/l	8260	4/12/02 21:57	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by:

 R.I. Analytical

Sample #: 004

P-37S GRAB 04/04/02 @1231

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<500	500	ug/l	8260	4/12/02 21:57	BML
2-hexanone	<500	500	ug/l	8260	4/12/02 21:57	BML
Styrene	<10	10	ug/l	8260	4/12/02 21:57	BML
o-chlorotoluene	<10	10	ug/l	8260	4/12/02 21:57	BML
1,2-Dichlorobenzene	<10	10	ug/l	8260	4/12/02 21:57	BML
1,3-Dichlorobenzene	<10	10	ug/l	8260	4/12/02 21:57	BML
1,4-Dichlorobenzene	<10	10	ug/l	8260	4/12/02 21:57	BML
Surrogates		RANGE		8260	4/12/02 21:57	BML
Dibromofluoromethane	101		.86-118%	8260	4/12/02 21:57	BML
Bromofluorobenzene	104		.86-115%	8260	4/12/02 21:57	BML
Toluene-D8	103		.88-110%	8260	4/12/02 21:57	BML

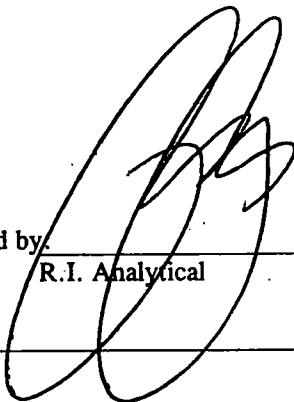
Detection limits increased as a result of sample dilution. Sample dilution required to achieve target compound response within the calibration range of the analysis.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by:


R.I. Analytical

Sample #: 005

SAMPLE DESCRIPTION: P-38S GRAB 04/04/02 @1320

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.4		SU	EPA 150.1	4/04/02 13:20	JEC
TEMPERATURE (field)	61		F	EPA 170.1	4/04/02 13:20	JEC
SPECIFIC CONDUCTANCE	297	1	uMHOS/CM	EPA 120.1	4/04/02 13:20	JEC
Dissolved Oxygen	2.0	1.0	mg/l	EPA 360.1	4/04/02 13:20	JEC
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/12/02 22:29	BML
Bromomethane	<10	10	ug/l	8260	4/12/02 22:29	BML
vinyl chloride	<1	1	ug/l	8260	4/12/02 22:29	BML
dichlorodifluoromethane	<10	10	ug/l	8260	4/12/02 22:29	BML
chloroethane	<10	10	ug/l	8260	4/12/02 22:29	BML
methylene chloride	<5	5	ug/l	8260	4/12/02 22:29	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/12/02 22:29	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/12/02 22:29	BML
1,1-dichloroethane	<1	1	ug/l	8260	4/12/02 22:29	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/12/02 22:29	BML
chloroform	<1	1	ug/l	8260	4/12/02 22:29	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/12/02 22:29	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/12/02 22:29	BML
carbon tetrachloride	<1	1	ug/l	8260	4/12/02 22:29	BML
Bromodichloromethane	<1	1	ug/l	8260	4/12/02 22:29	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/12/02 22:29	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 22:29	BML
Trichloroethylene	<1	1	ug/l	8260	4/12/02 22:29	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 22:29	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/12/02 22:29	BML
Dibromochloromethane	<1	1	ug/l	8260	4/12/02 22:29	BML
Bromoform	<1	1	ug/l	8260	4/12/02 22:29	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/12/02 22:29	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/12/02 22:29	BML
Chlorobenzene	2	1	ug/l	8260	4/12/02 22:29	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/12/02 22:29	BML
Benzene	<1	1	ug/l	8260	4/12/02 22:29	BML
toluene	<1	1	ug/l	8260	4/12/02 22:29	BML
ethylbenzene	<1	1	ug/l	8260	4/12/02 22:29	BML
xylenes(Total)	<1	1	ug/l	8260	4/12/02 22:29	BML
acetone	<10	10	ug/l	8260	4/12/02 22:29	BML
Carbon disulfide	<5	5	ug/l	8260	4/12/02 22:29	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/12/02 22:29	BML
vinyl acetate	<50	50	ug/l	8260	4/12/02 22:29	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 005

P-38S GRAB 04/04/02 @1320

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/12/02 22:29	BML
2-hexanone	<50	50	ug/l	8260	4/12/02 22:29	BML
Styrene	<1	1	ug/l	8260	4/12/02 22:29	BML
o-chlorotoluene	<1	1	ug/l	8260	4/12/02 22:29	BML
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 22:29	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 22:29	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 22:29	BML
Surrogates			RANGE	8260	4/12/02 22:29	BML
Dibromofluoromethane	100		86-118%	8260	4/12/02 22:29	BML
Bromofluorobenzene	103		86-115%	8260	4/12/02 22:29	BML
Toluene-D8	100		88-110%	8260	4/12/02 22:29	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 006

SAMPLE DESCRIPTION: SW-110 GRAB 04/04/02 @1330

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	7.0		SU	EPA 150.1	4/04/02 13:30	JEC
TEMPERATURE (field)	58		F	EPA 170.1	4/04/02 13:30	JEC
SPECIFIC CONDUCTANCE	327	1	µMHOS/CM	EPA 120.1	4/04/02 13:30	JEC
Dissolved Oxygen	1.8	1.0	mg/l	EPA 360.1	4/04/02 13:30	JEC
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/12/02 23:00	BML
Bromomethane	<10	10	ug/l	8260	4/12/02 23:00	BML
vinyl chloride	7	1	ug/l	8260	4/12/02 23:00	BML
chlorodifluoromethane	<10	10	ug/l	8260	4/12/02 23:00	BML
chloroethane	<10	10	ug/l	8260	4/12/02 23:00	BML
methylene chloride	<5	5	ug/l	8260	4/12/02 23:00	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/12/02 23:00	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/12/02 23:00	BML
1,1-dichloroethane	<1	1	ug/l	8260	4/12/02 23:00	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/12/02 23:00	BML
chloroform	<1	1	ug/l	8260	4/12/02 23:00	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/12/02 23:00	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/12/02 23:00	BML
carbon tetrachloride	<1	1	ug/l	8260	4/12/02 23:00	BML
Bromodichloromethane	<1	1	ug/l	8260	4/12/02 23:00	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/12/02 23:00	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 23:00	BML
Trichloroethylene	<1	1	ug/l	8260	4/12/02 23:00	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 23:00	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/12/02 23:00	BML
Dibromochloromethane	<1	1	ug/l	8260	4/12/02 23:00	BML
Bromoform	<1	1	ug/l	8260	4/12/02 23:00	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/12/02 23:00	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/12/02 23:00	BML
Chlorobenzene	2	1	ug/l	8260	4/12/02 23:00	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/12/02 23:00	BML
Benzene	<1	1	ug/l	8260	4/12/02 23:00	BML
toluene	<1	1	ug/l	8260	4/12/02 23:00	BML
ethylbenzene	<1	1	ug/l	8260	4/12/02 23:00	BML
olenes(Total)	<1	1	ug/l	8260	4/12/02 23:00	BML
acetone	<10	10	ug/l	8260	4/12/02 23:00	BML
Carbon disulfide	<5	5	ug/l	8260	4/12/02 23:00	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/12/02 23:00	BML
vinyl acetate	<50	50	ug/l	8260	4/12/02 23:00	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 006

SW-110 GRAB 04/04/02 @1330

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/12/02 23:00	BML
2-hexanone	<50	50	ug/l	8260	4/12/02 23:00	BML
Styrene	<1	1	ug/l	8260	4/12/02 23:00	BML
o-chlorotoluene	<1	1	ug/l	8260	4/12/02 23:00	BML
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 23:00	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 23:00	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 23:00	BML
Surrogates			RANGE	8260	4/12/02 23:00	BML
Dibromofluoromethane	98		86-118%	8260	4/12/02 23:00	BML
Bromofluorobenzene	104		86-115%	8260	4/12/02 23:00	BML
Toluene-D8	100		88-110%	8260	4/12/02 23:00	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by

R.I. Analytical

Sample #: 007

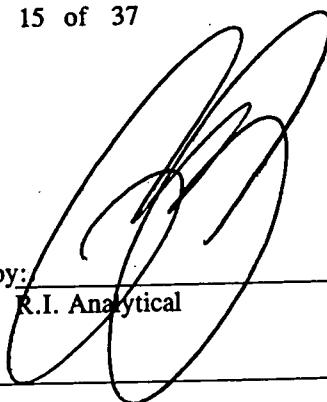
SAMPLE DESCRIPTION: P-36S GRAB 04/04/02 @1515

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	7.3		SU	EPA 150.1	4/04/02 15:15	JEC
TEMPERATURE (field)	55		F	EPA 170.1	4/04/02 15:15	JEC
SPECIFIC CONDUCTANCE	716	1	µMHOS/CM	EPA 120.1	4/04/02 15:15	JEC
Dissolved Oxygen	1.1	1.0	mg/l	EPA 360.1	4/04/02 15:15	JEC
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/12/02 23:32	BML
Bromomethane	<10	10	ug/l	8260	4/12/02 23:32	BML
vinyl chloride	<1	1	ug/l	8260	4/12/02 23:32	BML
chlorodifluoromethane	<10	10	ug/l	8260	4/12/02 23:32	BML
chloroethane	<10	10	ug/l	8260	4/12/02 23:32	BML
methylene chloride	<5	5	ug/l	8260	4/12/02 23:32	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/12/02 23:32	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/12/02 23:32	BML
1,1-dichloroethane	<1	1	ug/l	8260	4/12/02 23:32	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/12/02 23:32	BML
chloroform	<1	1	ug/l	8260	4/12/02 23:32	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/12/02 23:32	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/12/02 23:32	BML
carbon tetrachloride	<1	1	ug/l	8260	4/12/02 23:32	BML
Bromodichloromethane	<1	1	ug/l	8260	4/12/02 23:32	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/12/02 23:32	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 23:32	BML
Trichloroethylene	<1	1	ug/l	8260	4/12/02 23:32	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 23:32	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/12/02 23:32	BML
Dibromochloromethane	<1	1	ug/l	8260	4/12/02 23:32	BML
Bromoform	<1	1	ug/l	8260	4/12/02 23:32	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/12/02 23:32	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/12/02 23:32	BML
Chlorobenzene	230	10	ug/l	8260	4/12/02 23:32	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/12/02 23:32	BML
Benzene	5	1	ug/l	8260	4/12/02 23:32	BML
toluene	1	1	ug/l	8260	4/12/02 23:32	BML
phenylbenzene	<1	1	ug/l	8260	4/12/02 23:32	BML
styrenes(Total)	<1	1	ug/l	8260	4/12/02 23:32	BML
acetone	<10	10	ug/l	8260	4/12/02 23:32	BML
Carbon disulfide	<5	5	ug/l	8260	4/12/02 23:32	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/12/02 23:32	BML
vinyl acetate	<50	50	ug/l	8260	4/12/02 23:32	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by:

 R.I. Analytical

Sample #: 007

P-36S GRAB 04/04/02 @1515

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/12/02 23:32	BML
2-hexanone	<50	50	ug/l	8260	4/12/02 23:32	BML
Styrene	<1	1	ug/l	8260	4/12/02 23:32	BML
o-chlorotoluene	<1	1	ug/l	8260	4/12/02 23:32	BML
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 23:32	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 23:32	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 23:32	BML
Surrogates			RANGE	8260	4/12/02 23:32	BML
Dibromofluoromethane	100		86-118%	8260	4/12/02 23:32	BML
Bromofluorobenzene	103		86-115%	8260	4/12/02 23:32	BML
Toluene-D8	100		88-110%	8260	4/12/02 23:32	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 008

SAMPLE DESCRIPTION: P-35S GRAB 04/04/02 @1540

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.9		SU	EPA 150.1	4/04/02 15:40	JEC
TEMPERATURE (field)	53		F	EPA 170.1	4/04/02 15:40	JEC
SPECIFIC CONDUCTANCE	656	1	uMHOS/CM	EPA 120.1	4/04/02 15:40	JEC
Dissolved Oxygen	1.7	1.0	mg/l	EPA 360.1	4/04/02 15:40	JEC
Volatile Organic Compounds						
chloromethane	< 1000	1000	ug/l	8260	4/13/02 0:03	BML
Bromomethane	< 1000	1000	ug/l	8260	4/13/02 0:03	BML
vinyl chloride	310	100	ug/l	8260	4/13/02 0:03	BML
chlorodifluoromethane	< 1000	1000	ug/l	8260	4/13/02 0:03	BML
chloroethane	< 1000	1000	ug/l	8260	4/13/02 0:03	BML
methylene chloride	< 500	500	ug/l	8260	4/13/02 0:03	BML
trichlorofluoromethane	< 100	100	ug/l	8260	4/13/02 0:03	BML
1,1-dichloroethylene	< 100	100	ug/l	8260	4/13/02 0:03	BML
1,1-dichloroethane	< 100	100	ug/l	8260	4/13/02 0:03	BML
trans-1,2-Dichloroethylene	< 100	100	ug/l	8260	4/13/02 0:03	BML
chloroform	< 100	100	ug/l	8260	4/13/02 0:03	BML
1,2-dichloroethane	< 100	100	ug/l	8260	4/13/02 0:03	BML
1,1,1-Trichloroethane	< 100	100	ug/l	8260	4/13/02 0:03	BML
carbon tetrachloride	< 100	100	ug/l	8260	4/13/02 0:03	BML
Bromodichloromethane	< 100	100	ug/l	8260	4/13/02 0:03	BML
1,2-dichloropropane	< 100	100	ug/l	8260	4/13/02 0:03	BML
cis-1,3-Dichloropropylene	< 100	100	ug/l	8260	4/13/02 0:03	BML
Trichloroethylene	< 100	100	ug/l	8260	4/13/02 0:03	BML
trans-1,3-Dichloropropylene	< 100	100	ug/l	8260	4/13/02 0:03	BML
1,1,2-Trichloroethane	< 100	100	ug/l	8260	4/13/02 0:03	BML
Dibromochloromethane	< 100	100	ug/l	8260	4/13/02 0:03	BML
Bromoform	< 100	100	ug/l	8260	4/13/02 0:03	BML
Tetrachloroethylene	< 100	100	ug/l	8260	4/13/02 0:03	BML
1,1,2,2-Tetrachloroethane	< 100	100	ug/l	8260	4/13/02 0:03	BML
Chlorobenzene	8800	100	ug/l	8260	4/13/02 0:03	BML
2-chloroethyl vinyl ether	< 200	200	ug/l	8260	4/13/02 0:03	BML
Benzene	< 100	100	ug/l	8260	4/13/02 0:03	BML
toluene	< 100	100	ug/l	8260	4/13/02 0:03	BML
ethylbenzene	< 100	100	ug/l	8260	4/13/02 0:03	BML
enes(Total)	< 50	50	ug/l	8260	4/13/02 0:03	BML
acetone	< 1000	1000	ug/l	8260	4/13/02 0:03	BML
Carbon disulfide	< 500	500	ug/l	8260	4/13/02 0:03	BML
2-butanone(MEK)	< 1000	1000	ug/l	8260	4/13/02 0:03	BML
vinyl acetate	< 5000	5000	ug/l	8260	4/13/02 0:03	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 008

P-35S GRAB 04/04/02 @1540

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<5000	5000	ug/l	8260	4/13/02 0:03	BML
2-hexanone	<5000	5000	ug/l	8260	4/13/02 0:03	BML
Styrene	<100	100	ug/l	8260	4/13/02 0:03	BML
o-chlorotoluene	380	100	ug/l	8260	4/13/02 0:03	BML
1,2-Dichlorobenzene	9600	100	ug/l	8260	4/13/02 0:03	BML
1,3-Dichlorobenzene	<100	100	ug/l	8260	4/13/02 0:03	BML
1,4-Dichlorobenzene	<100	100	ug/l	8260	4/13/02 0:03	BML
Surrogates		RANGE		8260	4/13/02 0:03	BML
Dibromofluoromethane	102		86-118%	8260	4/13/02 0:03	BML
mofluorobenzene	103		86-115 %	8260	4/13/02 0:03	BML
ene-D8	100		88-110%	8260	4/13/02 0:03	BML

Detection limits increased as a result of sample dilution. Sample dilution required to achieve target compound response within the calibration range of the analysis.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 009

SAMPLE DESCRIPTION: MW-002S GRAB 04/05/02 @1020

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.6		SU	EPA 150.1	4/05/02 10:20	JEC
TEMPERATURE (field)	58		F	EPA 170.1	4/05/02 10:20	JEC
SPECIFIC CONDUCTANCE	455	1	uMHOS/CM	EPA 120.1	4/05/02 10:20	JEC
Dissolved Oxygen	2.7	1.0	mg/l	EPA 360.1	4/05/02 10:20	JEC
Volatile Organic Compounds						
chloromethane	< 1000	1000	ug/l	8260	4/13/02 0:34	BML
Bromomethane	< 1000	1000	ug/l	8260	4/13/02 0:34	BML
vinyl chloride	< 100	100	ug/l	8260	4/13/02 0:34	BML
1-chlorodifluoromethane	< 1000	1000	ug/l	8260	4/13/02 0:34	BML
chloroethane	< 1000	1000	ug/l	8260	4/13/02 0:34	BML
methylene chloride	< 500	500	ug/l	8260	4/13/02 0:34	BML
trichlorofluoromethane	< 100	100	ug/l	8260	4/13/02 0:34	BML
1,1-dichloroethylene	< 100	100	ug/l	8260	4/13/02 0:34	BML
1,1-dichloroethane	< 100	100	ug/l	8260	4/13/02 0:34	BML
trans-1,2-Dichloroethylene	< 100	100	ug/l	8260	4/13/02 0:34	BML
chloroform	< 100	100	ug/l	8260	4/13/02 0:34	BML
1,2-dichloroethane	< 100	100	ug/l	8260	4/13/02 0:34	BML
1,1,1-Trichloroethane	< 100	100	ug/l	8260	4/13/02 0:34	BML
carbon tetrachloride	< 100	100	ug/l	8260	4/13/02 0:34	BML
Bromodichloromethane	< 100	100	ug/l	8260	4/13/02 0:34	BML
1,2-dichloropropane	< 100	100	ug/l	8260	4/13/02 0:34	BML
cis-1,3-Dichloropropylene	< 100	100	ug/l	8260	4/13/02 0:34	BML
Trichloroethylene	< 100	100	ug/l	8260	4/13/02 0:34	BML
trans-1,3-Dichloropropylene	< 100	100	ug/l	8260	4/13/02 0:34	BML
1,1,2-Trichloroethane	< 100	100	ug/l	8260	4/13/02 0:34	BML
Dibromochloromethane	< 100	100	ug/l	8260	4/13/02 0:34	BML
Bromoform	< 100	100	ug/l	8260	4/13/02 0:34	BML
Tetrachloroethylene	< 100	100	ug/l	8260	4/13/02 0:34	BML
1,1,2,2-Tetrachloroethane	< 100	100	ug/l	8260	4/13/02 0:34	BML
Chlorobenzene	4700	100	ug/l	8260	4/13/02 0:34	BML
2-chloroethyl vinyl ether	< 200	200	ug/l	8260	4/13/02 0:34	BML
Benzene	< 100	100	ug/l	8260	4/13/02 0:34	BML
toluene	230	100	ug/l	8260	4/13/02 0:34	BML
ethylbenzene	< 100	100	ug/l	8260	4/13/02 0:34	BML
lenes(Total)	< 50	50	ug/l	8260	4/13/02 0:34	BML
acetone	< 1000	1000	ug/l	8260	4/13/02 0:34	BML
Carbon disulfide	< 500	500	ug/l	8260	4/13/02 0:34	BML
2-butanone(MEK)	< 1000	1000	ug/l	8260	4/13/02 0:34	BML
vinyl acetate	< 5000	5000	ug/l	8260	4/13/02 0:34	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 009

MW-002S GRAB 04/05/02 @1020

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<5000	5000	ug/l	8260	4/13/02 0:34	BML
2-hexanone	<5000	5000	ug/l	8260	4/13/02 0:34	BML
Styrene	<100	100	ug/l	8260	4/13/02 0:34	BML
o-chlorotoluene	<100	100	ug/l	8260	4/13/02 0:34	BML
1,2-Dichlorobenzene	360	100	ug/l	8260	4/13/02 0:34	BML
1,3-Dichlorobenzene	<100	100	ug/l	8260	4/13/02 0:34	BML
1,4-Dichlorobenzene	<100	100	ug/l	8260	4/13/02 0:34	BML
Surrogates			RANGE	8260	4/13/02 0:34	BML
Bromofluoromethane	102		86-118%	8260	4/13/02 0:34	BML
Bromofluorobenzene	103		86-115%	8260	4/13/02 0:34	BML
Toluene-D8	103		88-110%	8260	4/13/02 0:34	BML

Detection limits increased as a result of sample dilution. Sample dilution required to achieve target compound response within the calibration range of the analysis.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by

R.I. Analytical

Sample #: 010

SAMPLE DESCRIPTION: PW-120 PUMP HOUSE GRAB 04/05/02 @1040

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.6		SU	EPA 150.1	4/05/02 10:40	JEC
TEMPERATURE (field)	61		F	EPA 170.1	4/05/02 10:40	JEC
SPECIFIC CONDUCTANCE	358	1	µMHOS/CM	EPA 120.1	4/05/02 10:40	JEC
Dissolved Oxygen	1.3	1.0	mg/l	EPA 360.1	4/05/02 10:40	JEC
Volatile Organic Compounds						
chloromethane	<100	100	ug/l	8260	4/13/02 1:06	BML
Bromomethane	<100	100	ug/l	8260	4/13/02 1:06	BML
vinyl chloride	28	10	ug/l	8260	4/13/02 1:06	BML
chlorodifluoromethane	<100	100	ug/l	8260	4/13/02 1:06	BML
chloroethane	<100	100	ug/l	8260	4/13/02 1:06	BML
methylene chloride	<50	50	ug/l	8260	4/13/02 1:06	BML
trichlorofluoromethane	<10	10	ug/l	8260	4/13/02 1:06	BML
1,1-dichloroethylene	<10	10	ug/l	8260	4/13/02 1:06	BML
1,1-dichloroethane	<10	10	ug/l	8260	4/13/02 1:06	BML
trans-1,2-Dichloroethylene	<10	10	ug/l	8260	4/13/02 1:06	BML
chloroform	<10	10	ug/l	8260	4/13/02 1:06	BML
1,2-dichloroethane	<10	10	ug/l	8260	4/13/02 1:06	BML
1,1,1-Trichloroethane	<10	10	ug/l	8260	4/13/02 1:06	BML
carbon tetrachloride	<10	10	ug/l	8260	4/13/02 1:06	BML
Bromodichloromethane	<10	10	ug/l	8260	4/13/02 1:06	BML
1,2-dichloropropane	<10	10	ug/l	8260	4/13/02 1:06	BML
cis-1,3-Dichloropropylene	<10	10	ug/l	8260	4/13/02 1:06	BML
Trichloroethylene	<10	10	ug/l	8260	4/13/02 1:06	BML
trans-1,3-Dichloropropylene	<10	10	ug/l	8260	4/13/02 1:06	BML
1,1,2-Trichloroethane	<10	10	ug/l	8260	4/13/02 1:06	BML
Dibromochloromethane	<10	10	ug/l	8260	4/13/02 1:06	BML
Bromoform	<10	10	ug/l	8260	4/13/02 1:06	BML
Tetrachloroethylene	<10	10	ug/l	8260	4/13/02 1:06	BML
1,1,2,2-Tetrachloroethane	<10	10	ug/l	8260	4/13/02 1:06	BML
Chlorobenzene	660	10	ug/l	8260	4/13/02 1:06	BML
2-chloroethyl vinyl ether	<20	20	ug/l	8260	4/13/02 1:06	BML
Benzene	13	10	ug/l	8260	4/13/02 1:06	BML
toluene	28	10	ug/l	8260	4/13/02 1:06	BML
benzene	<10	10	ug/l	8260	4/13/02 1:06	BML
enes(Total)	<10	10	ug/l	8260	4/13/02 1:06	BML
acetone	<100	100	ug/l	8260	4/13/02 1:06	BML
Carbon disulfide	<50	50	ug/l	8260	4/13/02 1:06	BML
2-butanone(MEK)	<100	100	ug/l	8260	4/13/02 1:06	BML
vinyl acetate	<500	500	ug/l	8260	4/13/02 1:06	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.
 Date Received: 4/05/02
 Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 010

PW-120 PUMP HOUSE GRAB 04/05/02 @1040

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<500	500	ug/l	8260	4/13/02 1:06	BML
2-hexanone	<500	500	ug/l	8260	4/13/02 1:06	BML
Styrene	<10	10	ug/l	8260	4/13/02 1:06	BML
o-chlorotoluene	170	10	ug/l	8260	4/13/02 1:06	BML
1,2-Dichlorobenzene	320	10	ug/l	8260	4/13/02 1:06	BML
1,3-Dichlorobenzene	<10	10	ug/l	8260	4/13/02 1:06	BML
1,4-Dichlorobenzene	<10	10	ug/l	8260	4/13/02 1:06	BML
Surrogates			RANGE	8260	4/13/02 1:06	BML
Dibromofluoromethane	101		86-118%	8260	4/13/02 1:06	BML
Bromofluorobenzene	101		86-115%	8260	4/13/02 1:06	BML
Toluene-D8	101		88-110%	8260	4/13/02 1:06	BML

Detection limits increased as a result of sample dilution. Sample dilution required to achieve target compound response within the calibration range of the analysis.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 011

SAMPLE DESCRIPTION: SW-120 GRAB 04/05/02 @1050

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	7.2		SU	EPA 150.1	4/05/02 10:50	JEC
TEMPERATURE (field)	55		F	EPA 170.1	4/05/02 10:50	JEC
SPECIFIC CONDUCTANCE	342	1	uMHOS/CM	EPA 120.1	4/05/02 10:50	JEC
Dissolved Oxygen	1.8	1.0	mg/l	EPA 360.1	4/05/02 10:50	JEC
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/13/02 1:38	BML
Bromomethane	<10	10	ug/l	8260	4/13/02 1:38	BML
vinyl chloride	9	1	ug/l	8260	4/13/02 1:38	BML
chlorodifluoromethane	<10	10	ug/l	8260	4/13/02 1:38	BML
chloroethane	<10	10	ug/l	8260	4/13/02 1:38	BML
methylene chloride	<5	5	ug/l	8260	4/13/02 1:38	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/13/02 1:38	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/13/02 1:38	BML
1,1-dichloroethane	<1	1	ug/l	8260	4/13/02 1:38	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/13/02 1:38	BML
chloroform	<1	1	ug/l	8260	4/13/02 1:38	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/13/02 1:38	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/13/02 1:38	BML
carbon tetrachloride	<1	1	ug/l	8260	4/13/02 1:38	BML
Bromodichloromethane	<1	1	ug/l	8260	4/13/02 1:38	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/13/02 1:38	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/13/02 1:38	BML
Trichloroethylene	<1	1	ug/l	8260	4/13/02 1:38	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/13/02 1:38	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/13/02 1:38	BML
Dibromochloromethane	<1	1	ug/l	8260	4/13/02 1:38	BML
Bromoform	<1	1	ug/l	8260	4/13/02 1:38	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/13/02 1:38	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/13/02 1:38	BML
Chlorobenzene	39	1	ug/l	8260	4/13/02 1:38	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/13/02 1:38	BML
Benzene	<1	1	ug/l	8260	4/13/02 1:38	BML
toluene	<1	1	ug/l	8260	4/13/02 1:38	BML
o-xylene	<1	1	ug/l	8260	4/13/02 1:38	BML
benzenes(Total)	<1	1	ug/l	8260	4/13/02 1:38	BML
acetone	<10	10	ug/l	8260	4/13/02 1:38	BML
Carbon disulfide	<5	5	ug/l	8260	4/13/02 1:38	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/13/02 1:38	BML
vinyl acetate	<50	50	ug/l	8260	4/13/02 1:38	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 011

SW-120 GRAB 04/05/02 @1050

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/13/02 1:38	BML
2-hexanone	<50	50	ug/l	8260	4/13/02 1:38	BML
Styrene	<1	1	ug/l	8260	4/13/02 1:38	BML
o-chlorotoluene	<1	1	ug/l	8260	4/13/02 1:38	BML
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/13/02 1:38	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/13/02 1:38	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/13/02 1:38	BML
Surrogates		RANGE		8260	4/13/02 1:38	BML
Dibromofluoromethane	100		86-118%	8260	4/13/02 1:38	BML
Monofluorobenzene	102		86-115%	8260	4/13/02 1:38	BML
Toluene-D8	101		88-110%	8260	4/13/02 1:38	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 012

SAMPLE DESCRIPTION: PW-130 PUMP HOUSE GRAB 04/05/02 @1115

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.7		SU	EPA 150.1	4/05/02 11:15	JEC
TEMPERATURE (field)	62		F	EPA 170.1	4/05/02 11:15	JEC
SPECIFIC CONDUCTANCE	337	1	uMHOS/CM	EPA 120.1	4/05/02 11:15	JEC
Dissolved Oxygen	1.1	1.0	mg/l	EPA 360.1	4/05/02 11:15	JEC
Volatile Organic Compounds						
chloromethane	<100	100	ug/l	8260	4/13/02 2:10	BML
Bromomethane	<100	100	ug/l	8260	4/13/02 2:10	BML
vinyl chloride	28	10	ug/l	8260	4/13/02 2:10	BML
chlorodifluoromethane	<100	100	ug/l	8260	4/13/02 2:10	BML
chloroethane	<100	100	ug/l	8260	4/13/02 2:10	BML
methylene chloride	<50	50	ug/l	8260	4/13/02 2:10	BML
trichlorofluoromethane	<10	10	ug/l	8260	4/13/02 2:10	BML
1,1-dichloroethylene	<10	10	ug/l	8260	4/13/02 2:10	BML
1,1-dichloroethane	<10	10	ug/l	8260	4/13/02 2:10	BML
trans-1,2-Dichloroethylene	<10	10	ug/l	8260	4/13/02 2:10	BML
chloroform	<10	10	ug/l	8260	4/13/02 2:10	BML
1,2-dichloroethane	<10	10	ug/l	8260	4/13/02 2:10	BML
1,1,1-Trichloroethane	<10	10	ug/l	8260	4/13/02 2:10	BML
carbon tetrachloride	<10	10	ug/l	8260	4/13/02 2:10	BML
Bromodichloromethane	<10	10	ug/l	8260	4/13/02 2:10	BML
1,2-dichloropropene	<10	10	ug/l	8260	4/13/02 2:10	BML
cis-1,3-Dichloropropylene	<10	10	ug/l	8260	4/13/02 2:10	BML
Trichloroethylene	<10	10	ug/l	8260	4/13/02 2:10	BML
trans-1,3-Dichloropropylene	<10	10	ug/l	8260	4/13/02 2:10	BML
1,1,2-Trichloroethane	<10	10	ug/l	8260	4/13/02 2:10	BML
Dibromochloromethane	<10	10	ug/l	8260	4/13/02 2:10	BML
Bromoform	<10	10	ug/l	8260	4/13/02 2:10	BML
Tetrachloroethylene	<10	10	ug/l	8260	4/13/02 2:10	BML
1,1,2,2-Tetrachloroethane	<10	10	ug/l	8260	4/13/02 2:10	BML
Chlorobenzene	670	10	ug/l	8260	4/13/02 2:10	BML
2-chloroethyl vinyl ether	<20	20	ug/l	8260	4/13/02 2:10	BML
Benzene	14	10	ug/l	8260	4/13/02 2:10	BML
toluene	28	10	ug/l	8260	4/13/02 2:10	BML
benzene	<10	10	ug/l	8260	4/13/02 2:10	BML
benzenes(Total)	<10	10	ug/l	8260	4/13/02 2:10	BML
acetone	<100	100	ug/l	8260	4/13/02 2:10	BML
Carbon disulfide	<50	50	ug/l	8260	4/13/02 2:10	BML
2-butanone(MEK)	<100	100	ug/l	8260	4/13/02 2:10	BML
vinyl acetate	<500	500	ug/l	8260	4/13/02 2:10	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 012

PW-130 PUMP HOUSE GRAB 04/05/02 @1115

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<500	500	ug/l	8260	4/13/02 2:10	BML
2-hexanone	<500	500	ug/l	8260	4/13/02 2:10	BML
Styrene	<10	10	ug/l	8260	4/13/02 2:10	BML
o-chlorotoluene	170	10	ug/l	8260	4/13/02 2:10	BML
1,2-Dichlorobenzene	320	10	ug/l	8260	4/13/02 2:10	BML
1,3-Dichlorobenzene	<10	10	ug/l	8260	4/13/02 2:10	BML
1,4-Dichlorobenzene	<10	10	ug/l	8260	4/13/02 2:10	BML
Surrogates		RANGE		8260	4/13/02 2:10	BML
Dibromofluoromethane	101		86-118%	8260	4/13/02 2:10	BML
Monofluorobenzene	103		86-115%	8260	4/13/02 2:10	BML
He-D8	102		88-110%	8260	4/13/02 2:10	BML

Detection limits increased as a result of sample dilution. Sample dilution required to achieve target compound response within the calibration range of the analysis.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 013

SAMPLE DESCRIPTION: MW-004S GRAB 04/05/02 @1335

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.6		SU	EPA 150.1	4/05/02 13:35	JEC
TEMPERATURE (field)	51		F	EPA 170.1	4/05/02 13:35	JEC
SPECIFIC CONDUCTANCE	304	1	µMHOS/CM	EPA 120.1	4/05/02 13:35	JEC
Dissolved Oxygen	5.6	1.0	mg/l	EPA 360.1	4/05/02 13:35	JEC
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/13/02 2:42	BML
Bromomethane	<10	10	ug/l	8260	4/13/02 2:42	BML
vinyl chloride	<1	1	ug/l	8260	4/13/02 2:42	BML
chlorodifluoromethane	<10	10	ug/l	8260	4/13/02 2:42	BML
ethane	<10	10	ug/l	8260	4/13/02 2:42	BML
methylene chloride	<5	5	ug/l	8260	4/13/02 2:42	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/13/02 2:42	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/13/02 2:42	BML
1,1-dichloroethane	<1	1	ug/l	8260	4/13/02 2:42	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/13/02 2:42	BML
chloroform	<1	1	ug/l	8260	4/13/02 2:42	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/13/02 2:42	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/13/02 2:42	BML
carbon tetrachloride	<1	1	ug/l	8260	4/13/02 2:42	BML
Bromodichloromethane	<1	1	ug/l	8260	4/13/02 2:42	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/13/02 2:42	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/13/02 2:42	BML
Trichloroethylene	<1	1	ug/l	8260	4/13/02 2:42	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/13/02 2:42	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/13/02 2:42	BML
Dibromochloromethane	<1	1	ug/l	8260	4/13/02 2:42	BML
Bromoform	<1	1	ug/l	8260	4/13/02 2:42	BML
Tetrachloroethylene	3	1	ug/l	8260	4/13/02 2:42	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/13/02 2:42	BML
Chlorobenzene	1	1	ug/l	8260	4/13/02 2:42	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/13/02 2:42	BML
Benzene	<1	1	ug/l	8260	4/13/02 2:42	BML
toluene	<1	1	ug/l	8260	4/13/02 2:42	BML
xylylene	<1	1	ug/l	8260	4/13/02 2:42	BML
aromatics(Total)	<1	1	ug/l	8260	4/13/02 2:42	BML
acetone	<10	10	ug/l	8260	4/13/02 2:42	BML
Carbon disulfide	<5	5	ug/l	8260	4/13/02 2:42	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/13/02 2:42	BML
vinyl acetate	<50	50	ug/l	8260	4/13/02 2:42	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 013

MW-004S GRAB 04/05/02 @1335

PARAMETER	SAMPLE	DET.	METHOD	ANALYZED		ANALYST
	RESULTS	LIMIT		DATE/TIME		
4-methyl-2-pentanone(MIBK)	<50	50	8260	4/13/02 2:42		BML
2-hexanone	<50	50	8260	4/13/02 2:42		BML
Styrene	<1	1	8260	4/13/02 2:42		BML
o-chlorotoluene	<1	1	8260	4/13/02 2:42		BML
1,2-Dichlorobenzene	<1	1	8260	4/13/02 2:42		BML
1,3-Dichlorobenzene	<1	1	8260	4/13/02 2:42		BML
1,4-Dichlorobenzene	<1	1	8260	4/13/02 2:42		BML
Surrogates		RANGE	8260	4/13/02 2:42		BML
Dibromofluoromethane	100		8260	4/13/02 2:42		BML
monoFluorobenzene	103		8260	4/13/02 2:42		BML
benzene-D8	100		8260	4/13/02 2:42		BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 014

SAMPLE DESCRIPTION: MW-012S GRAB 04/05/02 @1345

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	7.1		SU	EPA 150.1	4/05/02 13:45	JEC
TEMPERATURE (field)	58		F	EPA 170.1	4/05/02 13:45	JEC
SPECIFIC CONDUCTANCE	267	1	uMHOS/CM	EPA 120.1	4/05/02 13:45	JEC
Dissolved Oxygen	<1.0	1.0	mg/l	EPA 360.1	4/05/02 13:45	JEC
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/13/02 3:13	BML
Bromomethane	<10	10	ug/l	8260	4/13/02 3:13	BML
vinyl chloride	<1	1	ug/l	8260	4/13/02 3:13	BML
chlorodifluoromethane	<10	10	ug/l	8260	4/13/02 3:13	BML
chloroethane	<10	10	ug/l	8260	4/13/02 3:13	BML
methylene chloride	<5	5	ug/l	8260	4/13/02 3:13	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/13/02 3:13	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/13/02 3:13	BML
1,1-dichloroethane	<1	1	ug/l	8260	4/13/02 3:13	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/13/02 3:13	BML
chloroform	<1	1	ug/l	8260	4/13/02 3:13	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/13/02 3:13	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/13/02 3:13	BML
carbon tetrachloride	<1	1	ug/l	8260	4/13/02 3:13	BML
Bromodichloromethane	<1	1	ug/l	8260	4/13/02 3:13	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/13/02 3:13	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/13/02 3:13	BML
Trichloroethylene	<1	1	ug/l	8260	4/13/02 3:13	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/13/02 3:13	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/13/02 3:13	BML
Dibromochloromethane	<1	1	ug/l	8260	4/13/02 3:13	BML
Bromoform	<1	1	ug/l	8260	4/13/02 3:13	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/13/02 3:13	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/13/02 3:13	BML
Chlorobenzene	<1	1	ug/l	8260	4/13/02 3:13	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/13/02 3:13	BML
Benzene	<1	1	ug/l	8260	4/13/02 3:13	BML
toluene	<1	1	ug/l	8260	4/13/02 3:13	BML
ethylbenzene	<1	1	ug/l	8260	4/13/02 3:13	BML
(s)Total	<1	1	ug/l	8260	4/13/02 3:13	BML
acetone	<10	10	ug/l	8260	4/13/02 3:13	BML
Carbon disulfide	<5	5	ug/l	8260	4/13/02 3:13	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/13/02 3:13	BML
vinyl acetate	<50	50	ug/l	8260	4/13/02 3:13	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 014

MW-012S GRAB 04/05/02 @1345

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/13/02 3:13	BML
2-hexanone	<50	50	ug/l	8260	4/13/02 3:13	BML
Styrene	<1	1	ug/l	8260	4/13/02 3:13	BML
o-chlorotoluene	<1	1	ug/l	8260	4/13/02 3:13	BML
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/13/02 3:13	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/13/02 3:13	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/13/02 3:13	BML
Surrogates		RANGE		8260	4/13/02 3:13	BML
Dibromofluoromethane	102		86-118%	8260	4/13/02 3:13	BML
monoFluorobenzene	104		86-115%	8260	4/13/02 3:13	BML
benzene-D8	101		88-110%	8260	4/13/02 3:13	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 015

SAMPLE DESCRIPTION: MW-021S GRAB 04/05/02 @1420

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
pH (field)	6.4		SU	EPA 150.1	4/05/02 14:20	JEC
TEMPERATURE (field)	52		F	EPA 170.1	4/05/02 14:20	JEC
SPECIFIC CONDUCTANCE	526	1	uMHOS/CM	EPA 120.1	4/05/02 14:20	JEC
Dissolved Oxygen	1.3	1.0	mg/l	EPA 360.1	4/05/02 14:20	JEC
Volatile Organic Compounds						
chloromethane	< 100	100	ug/l	8260	4/15/02 13:21	BML
Bromomethane	< 100	100	ug/l	8260	4/15/02 13:21	BML
vinyl chloride	< 10	10	ug/l	8260	4/15/02 13:21	BML
chlorodifluoromethane	< 100	100	ug/l	8260	4/15/02 13:21	BML
methane	< 100	100	ug/l	8260	4/15/02 13:21	BML
methylene chloride	< 50	50	ug/l	8260	4/15/02 13:21	BML
trichlorofluoromethane	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,1-dichloroethylene	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,1-dichloroethane	< 10	10	ug/l	8260	4/15/02 13:21	BML
trans-1,2-Dichloroethylene	< 10	10	ug/l	8260	4/15/02 13:21	BML
chloroform	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,2-dichloroethane	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,1,1-Trichloroethane	< 10	10	ug/l	8260	4/15/02 13:21	BML
carbon tetrachloride	< 10	10	ug/l	8260	4/15/02 13:21	BML
Bromodichloromethane	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,2-dichloropropane	< 10	10	ug/l	8260	4/15/02 13:21	BML
cis-1,3-Dichloropropylene	< 10	10	ug/l	8260	4/15/02 13:21	BML
Trichloroethylene	< 10	10	ug/l	8260	4/15/02 13:21	BML
trans-1,3-Dichloropropylene	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,1,2-Trichloroethane	< 10	10	ug/l	8260	4/15/02 13:21	BML
Dibromochloromethane	< 10	10	ug/l	8260	4/15/02 13:21	BML
Bromoform	< 10	10	ug/l	8260	4/15/02 13:21	BML
Tetrachloroethylene	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,1,2,2-Tetrachloroethane	< 10	10	ug/l	8260	4/15/02 13:21	BML
Chlorobenzene	< 10	10	ug/l	8260	4/15/02 13:21	BML
2-chloroethyl vinyl ether	< 20	20	ug/l	8260	4/15/02 13:21	BML
Benzene	< 10	10	ug/l	8260	4/15/02 13:21	BML
toluene	< 10	10	ug/l	8260	4/15/02 13:21	BML
ethylbenzene	< 10	10	ug/l	8260	4/15/02 13:21	BML
St(Total)	< 10	10	ug/l	8260	4/15/02 13:21	BML
acetone	< 100	100	ug/l	8260	4/15/02 13:21	BML
Carbon disulfide	< 50	50	ug/l	8260	4/15/02 13:21	BML
2-butanone(MEK)	< 100	100	ug/l	8260	4/15/02 13:21	BML
vinyl acetate	< 500	500	ug/l	8260	4/15/02 13:21	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 015

MW-021S GRAB 04/05/02 @1420

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
4-methyl-2-pentanone(MIBK)	< 500	500	ug/l	8260	4/15/02 13:21	BML
2-hexanone	< 500	500	ug/l	8260	4/15/02 13:21	BML
Styrene	< 10	10	ug/l	8260	4/15/02 13:21	BML
o-chlorotoluene	420	10	ug/l	8260	4/15/02 13:21	BML
1,2-Dichlorobenzene	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,3-Dichlorobenzene	< 10	10	ug/l	8260	4/15/02 13:21	BML
1,4-Dichlorobenzene	< 10	10	ug/l	8260	4/15/02 13:21	BML
Surrogates		RANGE		8260	4/15/02 13:21	BML
Dibromofluoromethane	105		86-118%	8260	4/15/02 13:21	BML
Chlorofluorobenzene	100		86-115%	8260	4/15/02 13:21	BML
Toluene-D8	104		88-110%	8260	4/15/02 13:21	BML

Detection limits increased as a result of sample dilution. Sample dilution required to achieve target compound response within the calibration range of the analysis.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 016

SAMPLE DESCRIPTION: TRIP BLANK GRAB 04/04/02 @0950

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/12/02 15:34	BML
Bromomethane	<10	10	ug/l	8260	4/12/02 15:34	BML
vinyl chloride	<1	1	ug/l	8260	4/12/02 15:34	BML
dichlorodifluoromethane	<10	10	ug/l	8260	4/12/02 15:34	BML
chloroethane	<10	10	ug/l	8260	4/12/02 15:34	BML
methylene chloride	<5	5	ug/l	8260	4/12/02 15:34	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/12/02 15:34	BML
1,1-dichloroethylene	<1	1	ug/l	8260	4/12/02 15:34	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/12/02 15:34	BML
chloroform	<1	1	ug/l	8260	4/12/02 15:34	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/12/02 15:34	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/12/02 15:34	BML
carbon tetrachloride	<1	1	ug/l	8260	4/12/02 15:34	BML
Bromodichloromethane	<1	1	ug/l	8260	4/12/02 15:34	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/12/02 15:34	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 15:34	BML
Trichloroethylene	<1	1	ug/l	8260	4/12/02 15:34	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 15:34	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/12/02 15:34	BML
Dibromochloromethane	<1	1	ug/l	8260	4/12/02 15:34	BML
Bromoform	<1	1	ug/l	8260	4/12/02 15:34	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/12/02 15:34	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/12/02 15:34	BML
Chlorobenzene	<1	1	ug/l	8260	4/12/02 15:34	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/12/02 15:34	BML
Benzene	<1	1	ug/l	8260	4/12/02 15:34	BML
toluene	<1	1	ug/l	8260	4/12/02 15:34	BML
ethylbenzene	<1	1	ug/l	8260	4/12/02 15:34	BML
xylenes(Total)	<1	1	ug/l	8260	4/12/02 15:34	BML
acetone	<10	10	ug/l	8260	4/12/02 15:34	BML
Carbon disulfide	<5	5	ug/l	8260	4/12/02 15:34	BML
acetone(MEK)	<10	10	ug/l	8260	4/12/02 15:34	BML
ethyl acetate	<50	50	ug/l	8260	4/12/02 15:34	BML
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/12/02 15:34	BML
2-hexanone	<50	50	ug/l	8260	4/12/02 15:34	BML
Styrene	<1	1	ug/l	8260	4/12/02 15:34	BML
o-chlorotoluene	<1	1	ug/l	8260	4/12/02 15:34	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 016

TRIP BLANK GRAB 04/04/02 @0950

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 15:34	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 15:34	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 15:34	BML
Surrogates			RANGE	8260	4/12/02 15:34	BML
Dibromofluoromethane	99		86-118%	8260	4/12/02 15:34	BML
4-Bromofluorobenzene	103		86-115%	8260	4/12/02 15:34	BML
Toluene-D8	101		88-110%	8260	4/12/02 15:34	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 017

SAMPLE DESCRIPTION: EQUIPMENT BLANK GRAB 04/04/02 @1240

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/12/02 16:06	BML
Bromomethane	<10	10	ug/l	8260	4/12/02 16:06	BML
vinyl chloride	<1	1	ug/l	8260	4/12/02 16:06	BML
dichlorodifluoromethane	<10	10	ug/l	8260	4/12/02 16:06	BML
chloroethane	<10	10	ug/l	8260	4/12/02 16:06	BML
methylene chloride	<5	5	ug/l	8260	4/12/02 16:06	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/12/02 16:06	BML
chloroethylene	<1	1	ug/l	8260	4/12/02 16:06	BML
chloroethane	<1	1	ug/l	8260	4/12/02 16:06	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/12/02 16:06	BML
chloroform	<1	1	ug/l	8260	4/12/02 16:06	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/12/02 16:06	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/12/02 16:06	BML
carbon tetrachloride	<1	1	ug/l	8260	4/12/02 16:06	BML
Bromodichloromethane	<1	1	ug/l	8260	4/12/02 16:06	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/12/02 16:06	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 16:06	BML
Trichloroethylene	<1	1	ug/l	8260	4/12/02 16:06	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 16:06	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/12/02 16:06	BML
Dibromochloromethane	<1	1	ug/l	8260	4/12/02 16:06	BML
Bromoform	<1	1	ug/l	8260	4/12/02 16:06	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/12/02 16:06	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/12/02 16:06	BML
Chlorobenzene	<1	1	ug/l	8260	4/12/02 16:06	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/12/02 16:06	BML
Benzene	<1	1	ug/l	8260	4/12/02 16:06	BML
toluene	<1	1	ug/l	8260	4/12/02 16:06	BML
ethylbenzene	<1	1	ug/l	8260	4/12/02 16:06	BML
xylenes(Total)	<1	1	ug/l	8260	4/12/02 16:06	BML
acetone	<10	10	ug/l	8260	4/12/02 16:06	BML
Carbon disulfide	<5	5	ug/l	8260	4/12/02 16:06	BML
2-butanone(MEK)	<10	10	ug/l	8260	4/12/02 16:06	BML
acetate	<50	50	ug/l	8260	4/12/02 16:06	BML
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/12/02 16:06	BML
2-hexanone	<50	50	ug/l	8260	4/12/02 16:06	BML
Styrene	<1	1	ug/l	8260	4/12/02 16:06	BML
o-chlorotoluene	<1	1	ug/l	8260	4/12/02 16:06	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 017

EQUIPMENT BLANK GRAB 04/04/02 @1240

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 16:06	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 16:06	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 16:06	BML
Surrogates		RANGE		8260	4/12/02 16:06	BML
Dibromofluoromethane	101		86-118%	8260	4/12/02 16:06	BML
4-Bromofluorobenzene	103		86-115%	8260	4/12/02 16:06	BML
Toluene-D8	101		88-110%	8260	4/12/02 16:06	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 018

SAMPLE DESCRIPTION: EQUIPMENT BLANK GRAB 04/05/02 @1100

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
Volatile Organic Compounds						
chloromethane	<10	10	ug/l	8260	4/12/02 16:37	BML
Bromomethane	<10	10	ug/l	8260	4/12/02 16:37	BML
vinyl chloride	<1	1	ug/l	8260	4/12/02 16:37	BML
dichlorodifluoromethane	<10	10	ug/l	8260	4/12/02 16:37	BML
chloroethane	<10	10	ug/l	8260	4/12/02 16:37	BML
methylene chloride	<5	5	ug/l	8260	4/12/02 16:37	BML
trichlorofluoromethane	<1	1	ug/l	8260	4/12/02 16:37	BML
dichloroethylene	<1	1	ug/l	8260	4/12/02 16:37	BML
dichloroethane	<1	1	ug/l	8260	4/12/02 16:37	BML
trans-1,2-Dichloroethylene	<1	1	ug/l	8260	4/12/02 16:37	BML
chloroform	<1	1	ug/l	8260	4/12/02 16:37	BML
1,2-dichloroethane	<1	1	ug/l	8260	4/12/02 16:37	BML
1,1,1-Trichloroethane	<1	1	ug/l	8260	4/12/02 16:37	BML
carbon tetrachloride	<1	1	ug/l	8260	4/12/02 16:37	BML
Bromodichloromethane	<1	1	ug/l	8260	4/12/02 16:37	BML
1,2-dichloropropane	<1	1	ug/l	8260	4/12/02 16:37	BML
cis-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 16:37	BML
Trichloroethylene	<1	1	ug/l	8260	4/12/02 16:37	BML
trans-1,3-Dichloropropylene	<1	1	ug/l	8260	4/12/02 16:37	BML
1,1,2-Trichloroethane	<1	1	ug/l	8260	4/12/02 16:37	BML
Dibromochloromethane	<1	1	ug/l	8260	4/12/02 16:37	BML
Bromoform	<1	1	ug/l	8260	4/12/02 16:37	BML
Tetrachloroethylene	<1	1	ug/l	8260	4/12/02 16:37	BML
1,1,2,2-Tetrachloroethane	<1	1	ug/l	8260	4/12/02 16:37	BML
Chlorobenzene	<1	1	ug/l	8260	4/12/02 16:37	BML
2-chloroethyl vinyl ether	<2	2	ug/l	8260	4/12/02 16:37	BML
Benzene	<1	1	ug/l	8260	4/12/02 16:37	BML
toluene	<1	1	ug/l	8260	4/12/02 16:37	BML
ethylbenzene	<1	1	ug/l	8260	4/12/02 16:37	BML
xylenes(Total)	<1	1	ug/l	8260	4/12/02 16:37	BML
acetone	<10	10	ug/l	8260	4/12/02 16:37	BML
Carbon disulfide	<5	5	ug/l	8260	4/12/02 16:37	BML
butanone(MEK)	<10	10	ug/l	8260	4/12/02 16:37	BML
ethyl acetate	<50	50	ug/l	8260	4/12/02 16:37	BML
4-methyl-2-pentanone(MIBK)	<50	50	ug/l	8260	4/12/02 16:37	BML
2-hexanone	<50	50	ug/l	8260	4/12/02 16:37	BML
Styrene	<1	1	ug/l	8260	4/12/02 16:37	BML
o-chlorotoluene	<1	1	ug/l	8260	4/12/02 16:37	BML

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Ciba Specialty Chemicals Corp.

Date Received: 4/05/02

Work Order # 0204-04119

Approved by:

R.I. Analytical

Sample #: 018

EQUIPMENT BLANK GRAB 04/05/02 @1100

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
1,2-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 16:37	BML
1,3-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 16:37	BML
1,4-Dichlorobenzene	<1	1	ug/l	8260	4/12/02 16:37	BML
Surrogates			RANGE	8260	4/12/02 16:37	BML
Dibromofluoromethane	100		86-118%	8260	4/12/02 16:37	BML
4-Bromofluorobenzene	102		86-115%	8260	4/12/02 16:37	BML
Toluene-D8	102		88-110%	8260	4/12/02 16:37	BML

CIBA MONITORING WELLS

April 4, 2002

J. Chraft, A. Carr

WELL # PW-110

Inch Well pumping
well

Depth to Bottom _____

Depth to Water _____

N/A

Height of Column _____

Amount of Purge _____

PURGE START / TIME = 1110	# 1	# 2	# 3
PH	6.4	6.6	6.5
Specific Conductance	380	330	320
Temperature	59°	60	60
D.O.	21		
Purge End Time	1110		
Sample Time	1120		

COMMENTS: pH Meter calibrated w/ 7 & 10 buffer

CIBA MONITORING WELLS

April 4, 2002

J. Chraft, A. Carr

WELL # MW-001S

Inch Well 4"

Depth to Bottom 19.4

Depth to Water 8.4

Height of Column 11.4

Amount of Purge 22.8 gal

PURGE START / TIME = 10:40	# 1	# 2	# 3
PH	7.0	7.1	7.0
Specific Conductance	692	769	798
Temperature	60°	61°	59°
D.O.	1.8		
Purge End Time	11:15		
Sample Time	11:40		

COMMENTS:

CIBA MONITORING WELLS

April 4, 2002

J. Chraft, A. Carr

WELL # SW-130

Inch Well 2"

Depth to Bottom 35.3

Depth to Water 9.7

Height of Column 25.6

Amount of Purge 12.8 gal

PURGE START / TIME = 1035	# 1	# 2	# 3
PH	6.8	6.8	6.6
Specific Conductance	336	285	279
Temperature	64	63	62
D.O.	1.3		
Purge End Time	11:45		
Sample Time	11:52		

COMMENTS: Well column bent. Bailer will not fit down column. Pumped sample out with vinyl tubing

CIBA MONITORING WELLS

J. Chraft, A. Carr

April 4, 2002

WELL # P-37S

Inch Well 2"

Depth to Bottom 17.0

Depth to Water 9.5

Height of Column 7.5

Amount of Purge 3.7 gal

PURGE START / TIME = 1145	#1	#2	#3
PH	7.0	7.1	
Specific Conductance	512	482	
Temperature	61°	60°	
D.O.	1.8		
Purge End Time	1155		
Sample Time	1231		

COMMENTS:

CIBA MONITORING WELLS

April 4, 2002

J. Chraft, A. Carr

WELL # P-385

Inch Well 2"

Depth to Bottom 18.4

Depth to Water 7.5

Height of Column 10.7

Amount of Purge 5.8

<u>PURGE START / TIME = 1255</u>	# 1	# 2	# 3
PH	6.6	6.5	6.4
Specific Conductance	343	308	297
Temperature	63°	62°	61°
D.O.	2.0		
Purge End Time	1310		
Sample Time	1320		

COMMENTS:

CIBA MONITORING WELLS

April 4, 2002

J. Chraft, A. Carr

WELL # SW-110

Inch Well 2"

Depth to Bottom 34.7

Depth to Water 9.5

Height of Column 25.2

Amount of Purge 12.6

PURGE START / TIME = 12:22	# 1	# 2	# 3
PH	6.9	7.0	
Specific Conductance	325	327	
Temperature	60	58	
D.O.	1.8		
Purge End Time	1315		
Sample Time	1330		

COMMENTS:

CIBA MONITORING WELLS

April 4, 2002

J. Chraft, A. Carr

WELL # P-365

Inch Well 2"

Depth to Bottom 18'

Depth to Water 8'8"

Height of Column 9'2"

Amount of Purge 4.6

PURGE START / TIME = 1450	# 1	# 2	# 3
PH	7.3	7.3	
Specific Conductance	686	716	
Temperature	58	55	
D.O.	1.1		
Purge End Time	1505		
Sample Time	1515		

COMMENTS:

Water was full of black particles, smelt strongly of solvents and had an oily sheen on the top of the water

CIBA MONITORING WELLS

April 4, 2002

J. Chraft, A. Carr

WELL # P-35S

Inch Well

Depth to Bottom 17.4

Depth to Water 8.2

Height of Column 9.2

Amount of Purge 4.6

PURGE START / TIME = 1505	# 1	# 2	# 3
PH	6.9	6.9	
Specific Conductance	644	656	
Temperature	54	53	
D.O.	1.7		
Purge End Time	1530		
Sample Time	1540		

COMMENTS:

CIBA MONITORING WELLS

March 5, 2002

J. Chraft, A. Carr

WELL # MW-002S

Inch Well

4'

Depth to Bottom 19.1

Depth to Water 8.8

Height of Column 10.3

Amount of Purge 20.6

PURGE START / TIME = 0950	# 1	# 2	# 3
PH	6.6	6.6	
Specific Conductance	437	455	
Temperature	60°	58	
D.O.	2.7		
Purge End Time			
Sample Time	1020		

COMMENTS:

CIBA MONITORING WELLS

April , 2002

J. Chraft, A. Carr

WELL # Pws-120

Inch Well

Pumping
Well

Depth to Bottom

N/A

Depth to Water

Height of Column

Amount of Purge

PURGE START / TIME =	# 1	# 2	# 3
PH	6.6	6.6	
Specific Conductance	360	358	
Temperature	58°	61°	
D.O.	1.3		
Purge End Time			
Sample Time	1090		

COMMENTS:

CIBA MONITORING WELLS

April 5, 2002

J. Chraft, A. Carr

WELL # SW-120

Inch Well 2"

Depth to Bottom 26.1

Depth to Water 8.9

Height of Column 17.2

Amount of Purge 8.6

PURGE START / TIME = 1000	# 1	# 2	# 3
PH	6.9	7.2	
Specific Conductance	323.	342	
Temperature	56	55	
D.O.	1.8		
Purge End Time	1045		
Sample Time	1050		

COMMENTS:

CIBA MONITORING WELLS

April , 2002

J. Chraft, A. Carr

WELL # PW-130

Inch Well Pumping
Well

Depth to Bottom _____

Depth to Water _____ N/A

Height of Column _____

Amount of Purge _____

PURGE START / TIME =	# 1	# 2	# 3
PH	6.8	6.7	
Specific Conductance	358	337	
Temperature	63°	62°	
D.O.	1.1		
Purge End Time			
Sample Time	11:15		

COMMENTS:

CIBA MONITORING WELLS

April 5, 2002

J. Chraft, A. Carr

WELL # MW-004S

Inch Well 4" well

Depth to Bottom 22.6

Depth to Water 10.3

Height of Column 12.3

Amount of Purge 24.6

PURGE START / TIME = 11:45	# 1	# 2	# 3
PH	6.6	6.6	
Specific Conductance	304	304	
Temperature	52	51	
D.O.	5.6		
Purge End Time	1230		
Sample Time	1335		

COMMENTS:

CIBA MONITORING WELLS

April 5, 2002

J. Chraft, A. Carr

WELL # MW-0125

Inch Well 4"

Depth to Bottom 21.9

Depth to Water 12.2

Height of Column 9.7

Amount of Purge 19.4

PURGE START / TIME = 11:45	# 1	# 2	# 3
PH	7.1	7.1	
Specific Conductance	273	267	
Temperature	59	58	
D.O.	< 1		
Purge End Time	1205		
Sample Time	1345		

COMMENTS:

CIBA MONITORING WELLS

April 15, 2002

J. Chraft, A. Carr

WELL # MW-0215

Inch Well 4" Well

Depth to Bottom 17.5

Depth to Water 4.8

Height of Column 12.7

Amount of Purge 25.4

PURGE START / TIME = 1400	# 1	# 2	# 3
PH	6.5	6.4	
Specific Conductance	532	526	
Temperature	53°	52°	
D.O.	1.3		
Purge End Time	1415		
Sample Time	1420		

COMMENTS:

VOLATILE ORGANICS METHOD BLANK DATA SHEET

Lab Name: RI ANALYTICAL

Client: CIBA SPECIALTY CHEMICALS CORP.

W.O. # 0204-04119

CONCENTRATION UNITS:

COMPOUND

ug/l

Dichlorodifluoromethane	<10
Chloromethane	<10
Vinyl Chloride	<1
Bromomethane	<10
Chloroethane	<10
Trichlorofluoromethane	<1
1,1-Dichloroethene	<1
Methylene Chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
Chloroform	<1
1,1,1-Trichloroethane	<1
Carbon Tetrachloride	<1
Benzene	<1
1,2-Dichloroethane	<1
Trichloroethylene	<1
1,2-Dichloropropane	<1
Bromodichloromethane	<1
Toluene	<1
1,1,2-Trichloroethane	<1
Tetrachloroethylene	<1
Dibromochloromethane	<1
Chlorobenzene	<1
Ethylbenzene	<1
Xylenes (total)	<1
Bromoform	<1

VOLATILE ORGANICS METHOD BLANK DATA SHEET

Lab Name: RI ANALYTICAL

Client: CIBA SPECIALTY CHEMICALS CORP.

W.O.#: 0204-04119

CONCENTRATION UNITS:

ug/l

COMPOUND

1,1,2,2-Tetrachloroethane	<1
o-Chlorotoluene	<1
1,3-Dichlorobenzene	<1
1,4-Dichlorobenzene	<1
1,2-Dichlorobenzene	<1
Carbon disulfide	<5
Acetone	<10
2-chloroethyl vinyl ether	<2
2-Butanone (MEK)	<10
4-Methyl-2-pentanone (MIBK)	<50
2-Hexanone	<50
Stryene	<1
cis-1,3-Dichloropropene	<1
trans-1,3-Dichloropropene	<1
Vinyl Acetate	<50
Dibromofluoromethane	102
1,2-Dichloroethane-d4	100
Toluene-d8	98
4-Bromofluorobenzene	100

VOLATILE ORGANICS DUPLICATE DATA SHEET

Lab Name: RI ANALYTICAL

Client: CIBA SPECIALTY CHEMICALS CORP.

Duplicate Sample # 0204-04119-015

W.O. # 0204-04119

COMPOUND	DUPLICATE		REPORTED		RPD
	SAMPLE RESULT ug/L	SAMPLE RESULT ug/L	MEAN ug/L	VALUE ug/L	
Dichlorodifluoromethane	<100	<100	<100	<100	0
Chloromethane	<100	<100	<100	<100	0
Vinyl Chloride	<10	<10	<10	<10	0
Bromomethane	<100	<100	<100	<100	0
Chloroethane	<100	<100	<100	<100	0
Trichlorofluoromethane	<10	<10	<10	<10	0
1,1-Dichloroethene	<10	<10	<10	<10	0
Methylene Chloride	<50	<50	<50	<50	0
trans-1,2-Dichloroethene	<10	<10	<10	<10	0
1,1-Dichloroethane	<10	<10	<10	<10	0
Chloroform	<10	<10	<10	<10	0
,1-Trichloroethane	<10	<10	<10	<10	0
Carbon Tetrachloride	<10	<10	<10	<10	0
Benzene	<10	<10	<10	<10	0
1,2-Dichloroethane	<10	<10	<10	<10	0
Trichloroethylene	<10	<10	<10	<10	0
1,2-Dichloropropane	<10	<10	<10	<10	0
Bromodichloromethane	<10	<10	<10	<10	0
Toluene	<10	<10	<10	<10	0
1,1,2-Trichloroethane	<10	<10	<10	<10	0
Tetrachloroethylene	<10	<10	<10	<10	0
Dibromochloromethane	<10	<10	<10	<10	0
Chlorobenzene	<10	<10	<10	<10	0
Ethylbenzene	<10	<10	<10	<10	0
Xylenes (total)	<10	<10	<10	<10	0
Bromoform	<10	<10	<10	<10	0

VOLATILE ORGANICS DUPLICATE DATA SHEET

Lab Name: RI ANALYTICAL

Duplicate Sample # 0204-04119-015

Client: CIBA SPECIALTY CHEMICALS CORP.

W.O. # 0204-04119

COMPOUND	SAMPLE RESULT ug/L	DUPLICATE SAMPLE RESULT ug/L	MEAN ug/L	REPORTED VALUE ug/L	RPD
1,1,2,2-Tetrachloroethane	<10	<10	<10	<10	0
o-Chlorotoluene	420	420	420	420	0
1,3-Dichlorobenzene	<10	<10	<10	<10	0
1,4-Dichlorobenzene	<10	<10	<10	<10	0
1,2-Dichlorobenzene	<10	<10	<10	<10	0
Carbon disulfide	<50	<50	<50	<50	0
Acetone	<100	<100	<100	<100	0
2-chloroethyl vinyl ether	<20	<20	<20	<20	0
2-Butanone (MEK)	<100	<100	<100	<100	0
4-Methyl-2-pentanone (MIBK)	<500	<500	<500	<500	0
Hexanone	<500	<500	<500	<500	0
Stryene	<10	<10	<10	<10	0
cis-1,3-Dichloropropene	<10	<10	<10	<10	0
trans-1,3-Dichloropropene	<10	<10	<10	<10	0
Vinyl Acetate	<500	<500	<500	<500	0
Dibromofluoromethane	105	107			
1,2-Dichloroethane-d4	109	110			
Toluene-d8	104	105			
4-Bromofluorobenzene	100	100			

R Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888
Phone: (401) 737-8500
Fax: (401) 738-1970

950 Boylston Street, Unit 102
Newton Highlands, MA 02461
Phone: (617) 965-5133
Fax: (617) 965-5624

CHAIN OF CUSTODY RECORD

Page 1 of 2

Container Type Codes:
P=Plastic V=Vial
G=Glass St=Sterile
AG=Amber Glass
O=Other (describe)

Preservative Codes:
NP=Non preserved S=Sulfuric
I=Cooled 4°C H=HCL
N=Nitric SH=NaOH
M=Methanol SB=NAHSO4

Matrix Codes:
GW=Groundwater S=Soil
WW=Wastewater SI=Sludge
DW=Drinking Water A=Air
O=Other (describe) B=Bulk/Solid

Date Collected	Time Collected	Sample ID	G=Grab C=Comp.	Containers # + (code)	Preservative (code)	Matrix (code)	Analysis Request
4-4-02	1120	PW-110 Pump House	G	3V	H	GIW	8260 including O-Chlorotoluene (pH, Temp., S.C., D.O. **)
	1140	MW-001S					
	1152	SW-130					
	1231	P-37S					
	1320	P-38S					
	1330	SW-110					
	1515	P-36S					
↓	1540	P-35S					
4-5-02	1020	MW-002S					
↓	1040	PW-120 Pump House					

Client Information

Project Information

Company Name:	Ciba Greigy			Project Name / Location:	Ciba Greigy site on Mill St, Cranston RI		
Address:	Rt 37 West, P.O BOX 71			P.O. Number:	Project Number:		
City / State / Zip:	Toms River, NJ 08754-0071			Report To:	Phone: Fax:		
Phone:	(903) 914-2737	Fax:	(903) 914-2909	Sampled by:	J. Chraft, A. Carr		
Contact:	Barry Cohen			Reference Proposal:			

Relinquished by:	Date	Time	Received by:	Date	Time
<i>J. Chraft</i>	4-5-02	16:00	<i>Lexie L Coon</i>	04/05/02	16:00

Turn Around Time:

Normal

5 business days
Surcharges may apply

Rush (business days)

Project Comments:
* QC to include: Matrix Spike
- Matrix Spike Duplicate
- Duplicate

** pH, temp, S.C., D.O.
taken in field. Field
notes and results
attached

RIAL USE ONLY:
 Pick-Up Only

RIAL Sampled

Shipped on Ice
RIAL W.O. # *0204-04119*

in

R. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888
Phone: (401) 737-8500
Fax: (401) 738-1970

950 Boylston Street, Unit 102
Newton Highlands, MA 02461
Phone: (617) 965-5133
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CHAIN OF CUSTODY RECORD

Page 1 of 2

Container Type Codes:
P=Plastic V=Vial
G=Glass St=Sterile
AG=Amber Glass
O=Other (describe)

Preservative Codes:
NP=Non preserved S=Sulfuric
I=Cooled 4°C H=HCL
N=Nitric SH=NaOH
M=Methanol SB=NAHSO4

Matrix Codes:
GW=Groundwater S=Soil
WW=Wastewater SI=Sludge
DW=Drinking Water A=Air
O=Other (describe) B=Bulk/Solid

Date Collected	Time Collected	Sample ID	G=Grab C=Comp.	Containers # + (code)	Preservative (code)	Matrix (code)	Analysis Request
4.5.02	1050	SW-120	G	3V	H	GW	8260 including O-Chlorotoluene (pH, Temp, S.C., D.O. **).
	1115	PW-130 Pump House					
	1335	MW-004S					
	1345	MW-012S					
	↓ 1420	MW-021S (*)		6V			
4.4.02	0950	Trip Blank	G	IV			
	↓ 1240	Equipment Blank					
4.5.02	1100	Equipment Blank					

Client Information

Company Name: Ciba Geigy
Address: Rt 37 West, PO BOX 71
City / State / Zip: Toms River, NJ 08754-0071
Phone: (903) 914-2737 Fax: (903) 914-2909
Contact: Barry Cohen

Project Information

Project Name / Location: Ciba Geigy site on Mill St, Cranston RI
P.O. Number: Project Number:
Report To: Phone: Fax:
Sampled by: J. Chraft, A. Carr
Reference Proposal:

Relinquished by:	Date	Time	Received by:	Date	Time
J. Chraft	4.5.02	16:00	Alice Cox	04/05/02	16:00

Turn Around Time:
<input checked="" type="checkbox"/> Normal
<input type="checkbox"/> 5 business days Surcharges may apply
<input type="checkbox"/> Rush _____ (business days)

Project Comments:
* QC to include: - Matrix Spike
- Matrix Spike Duplicate
- Duplicate

** pH, temp, S.C., D.O.
taken in field. Field
notes and results
attached.

RIAL USE ONLY:
 Pick-Up Only
 RIAL Sampled
 Shipped on Ice
RIAL W.O. # 0204-04117

APPENDIX C
TIME-SERIES
FOR
UPGRADIENT WELLS

Table 3
UPGRADIENT WELLS
Cumulative Results for Chemicals Of Concern
(Units in ppb)

Well No.	Date Sampled	1,2-Dichloro-benzene	Chloro-benzene	o-Chloro-toluene	Toluene	Xylenes
MPS		94	1700	1500	1700	76
MW-004S	6-Mar-96	89	210	1700	2100	300
MW-004S	1-May-96	88	130	1200	1500	160
MW-004S	9-Apr-97	43	44	160	88	100
MW-004S	8-Oct-97	72	41	660	370	480
MW-004S	28-Apr-98	40	220	1200	2700	130
MW-004S	15-Oct-98	100 U	580	300	100 U	100 U
MW-004S	16-Apr-99	50 U	50 U	50	50 U	730
MW-004S	27-Sep-99	31	93	400	20 U	79
MW-004S	20-Apr-00	74	170	20 U	84	20 U
MW-004S	22-Sep-00	30 U	240	30 U	30 U	30 U
MW-004S	19-Apr-01	1 U	1	36	1 U	2
MW-004S	18-Oct-01	2	5	20	1 U	1
MW-004S	5-Apr-02	1 U	1	1 U	1 U	1 U
MW-012S	5-Mar-96	4.3 U	2.4 J	2 U	2.8 U	75
MW-012S	2-May-96	4.3 U	1.5 J	2 U	2.8 U	42
MW-012S	10-Apr-97	1 U	1 U	1 U	1 U	1 U
MW-012S	8-Oct-97	1 U	1 U	1 U	1 U	12
MW-012S	28-Apr-98	1 U	1 U	1 U	1 U	65
MW-012S	15-Oct-98	10 U	10 U	10 U	10 U	87
MW-012S	16-Apr-99	10 U	12	10 U	10 U	24
MW-012S	27-Sep-99	58	1 U	1 U	1 U	6
MW-012S	20-Apr-00	1 U	1 U	1 U	1 U	1
MW-012S	22-Sep-00	1 U	2	1 U	1 U	1
MW-012S	18-Apr-01	1 U	1 U	1 U	1 U	25
MW-012S	18-Oct-01	1 U	3	1 U	1 U	1 U
MW-012S	5-Apr-02	1 U	1 U	1 U	1 U	1 U
MW-021S	6-Mar-96	43 U	30 U	480	12 J	34 U
MW-021S	1-May-96	22 U	5 J	820	15	17 U
MW-021S	10-Apr-97	1 U	1 U	120	1	6
MW-021S	27-Oct-97	30	49	24000	20000	1600
MW-021S	28-Apr-98	1 U	1 U	54	1 U	1 U
MW-021S	15-Oct-98	100 U	100 U	7900	2500	580
MW-021S	15-Apr-99	50 U	50 U	9000	50 U	520
MW-021S	27-Sep-99	40 U	40 U	8100	40 U	110
MW-021S	20-Apr-00	40 U	40 U	11000	40 U	40 U
MW-021S	22-Sep-00	500 U	500 U	16000	500 U	500 U
MW-021S	19-Apr-01	10 U	10 U	440	10 U	10 U
MW-021S	18-Oct-01	50 U	50 U	12000	270	210
MW-021S	5-Apr-02	10 U	10 U	420	10 U	10 U

MPS = Media Protection Standard

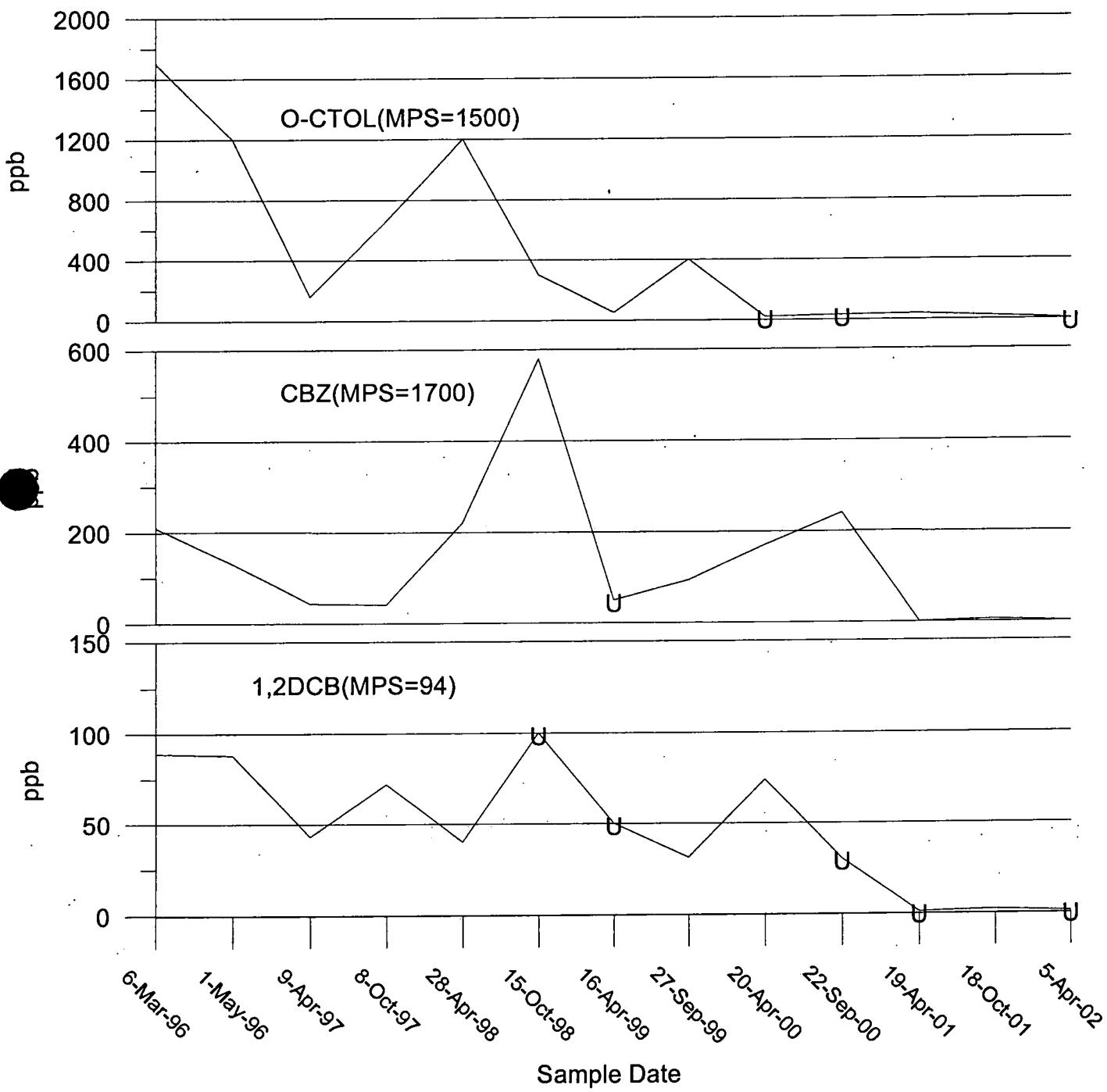
U = Nondetect with detection limit given

J = Estimated value

Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well MW-004S
Upgradient Well

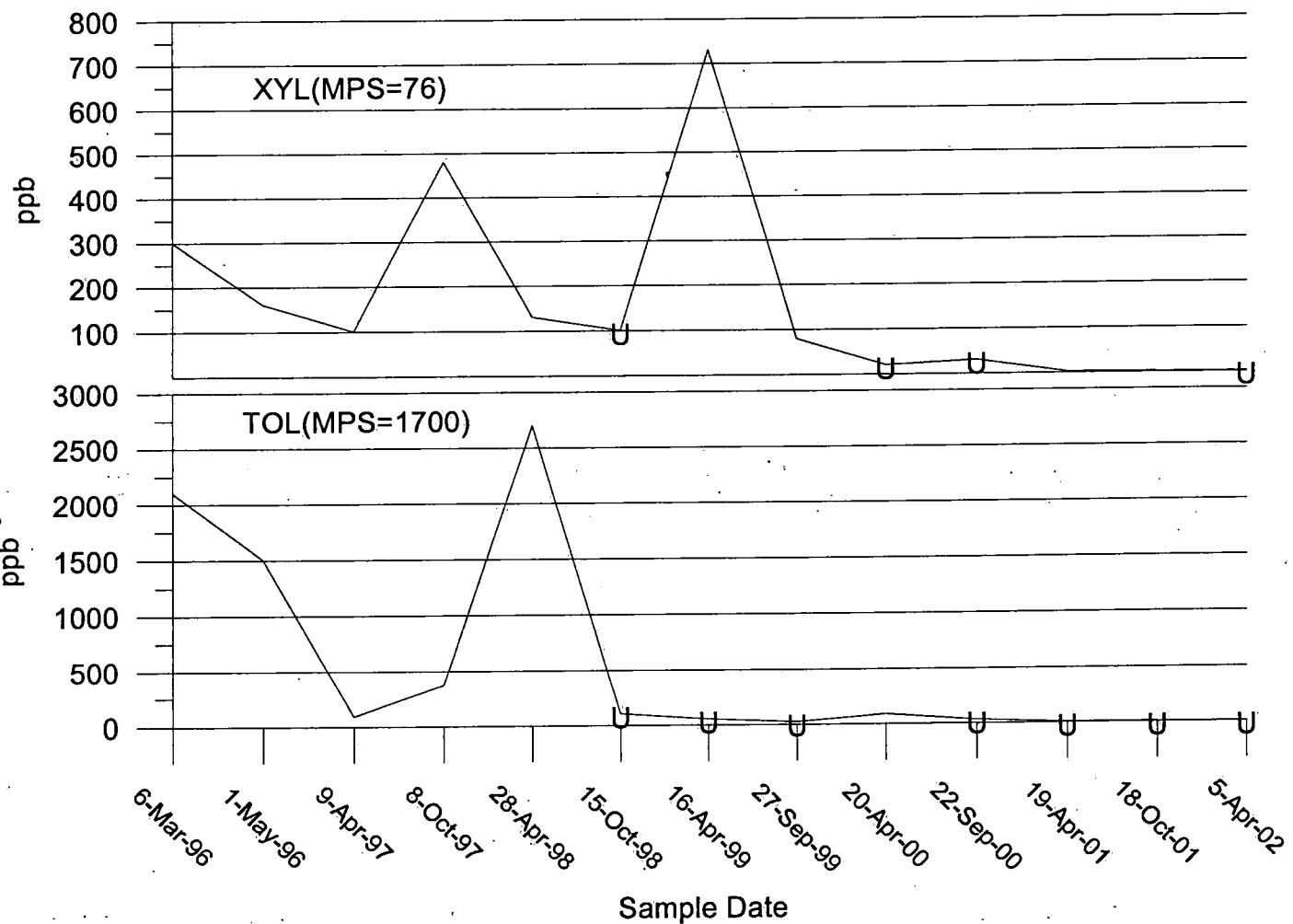
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"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well MW-004S
Upgradient Well

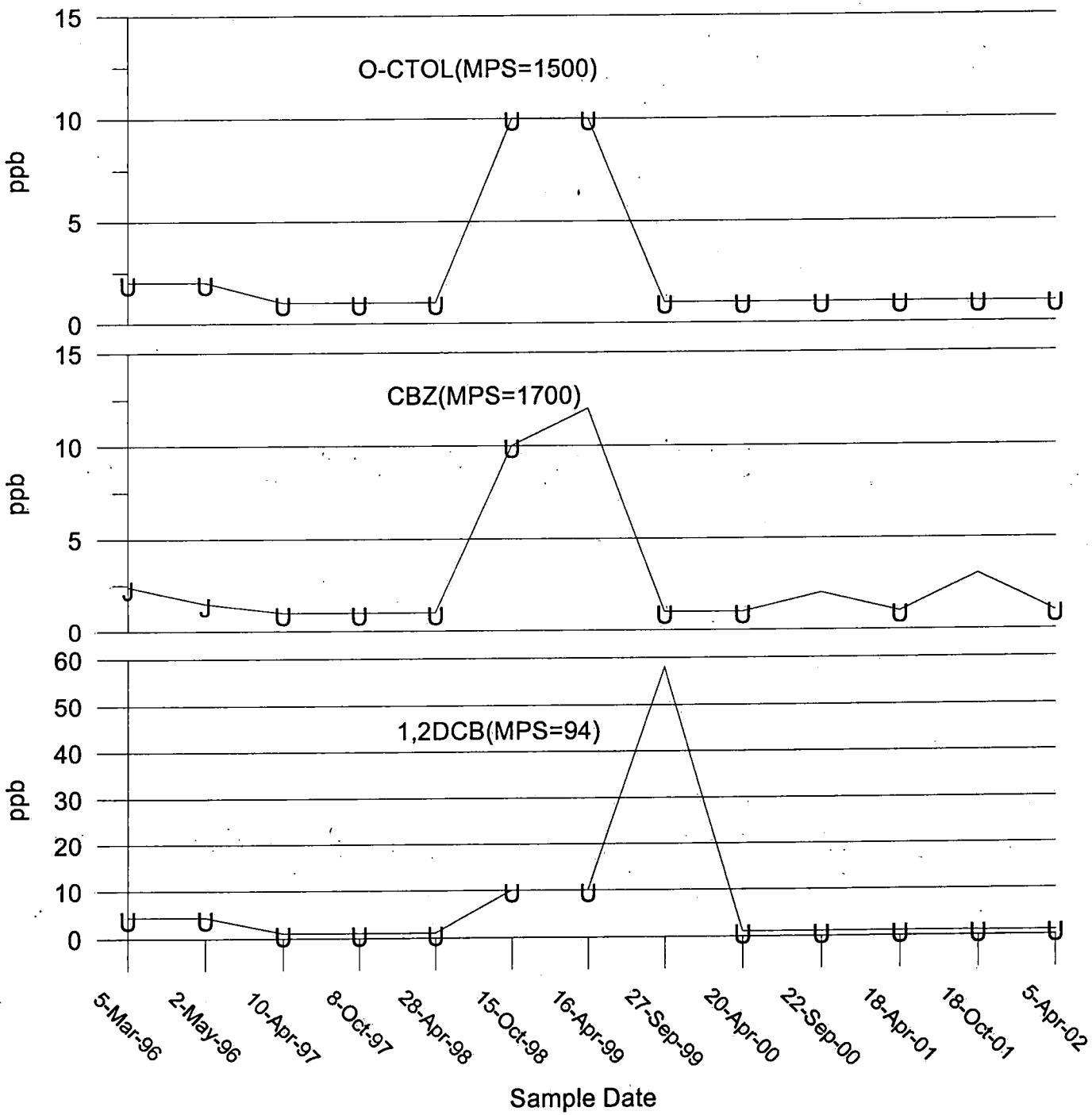
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"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well MW-012S
Upgradient Well

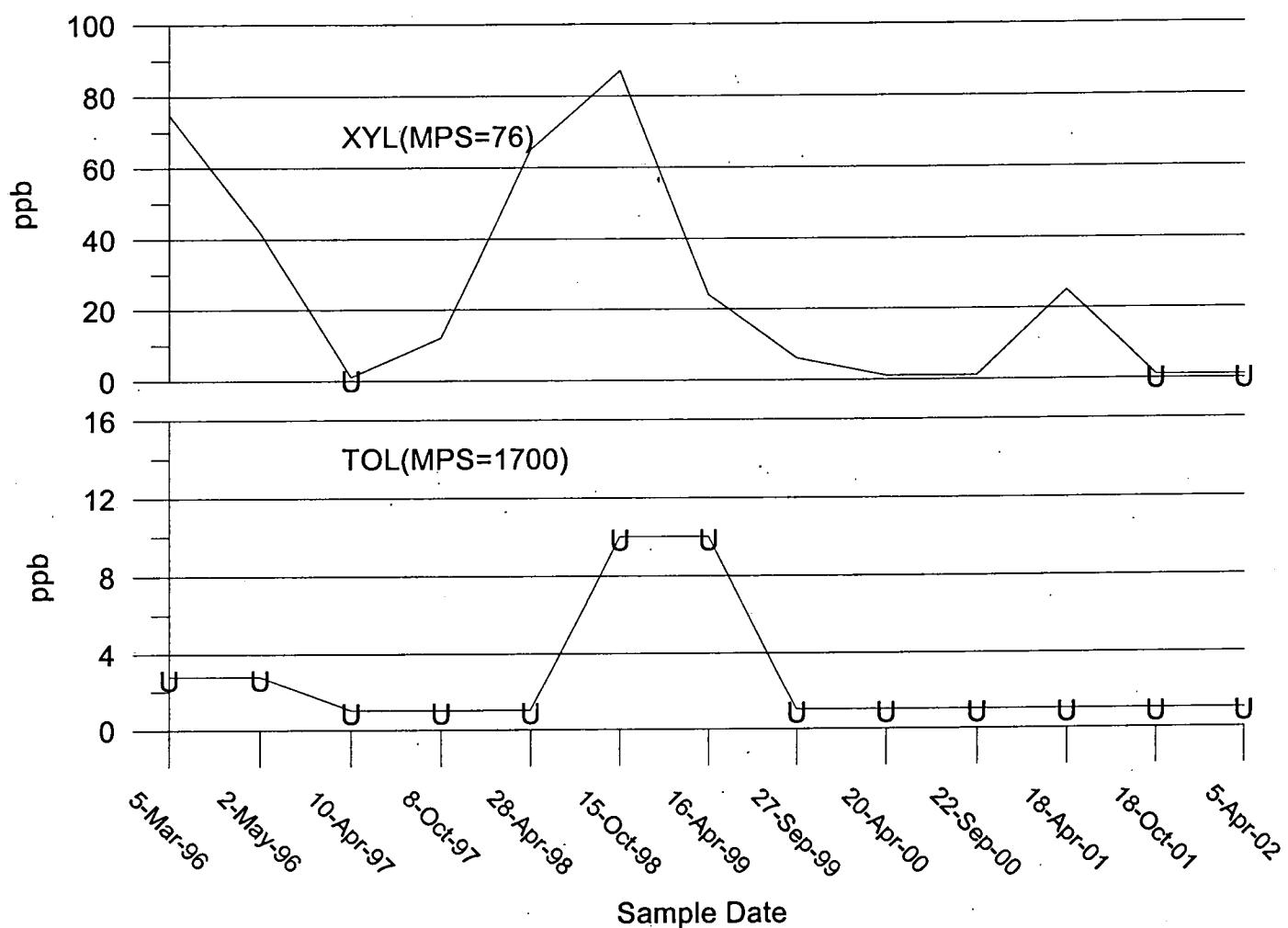
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Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well MW-012S
Upgradient Well

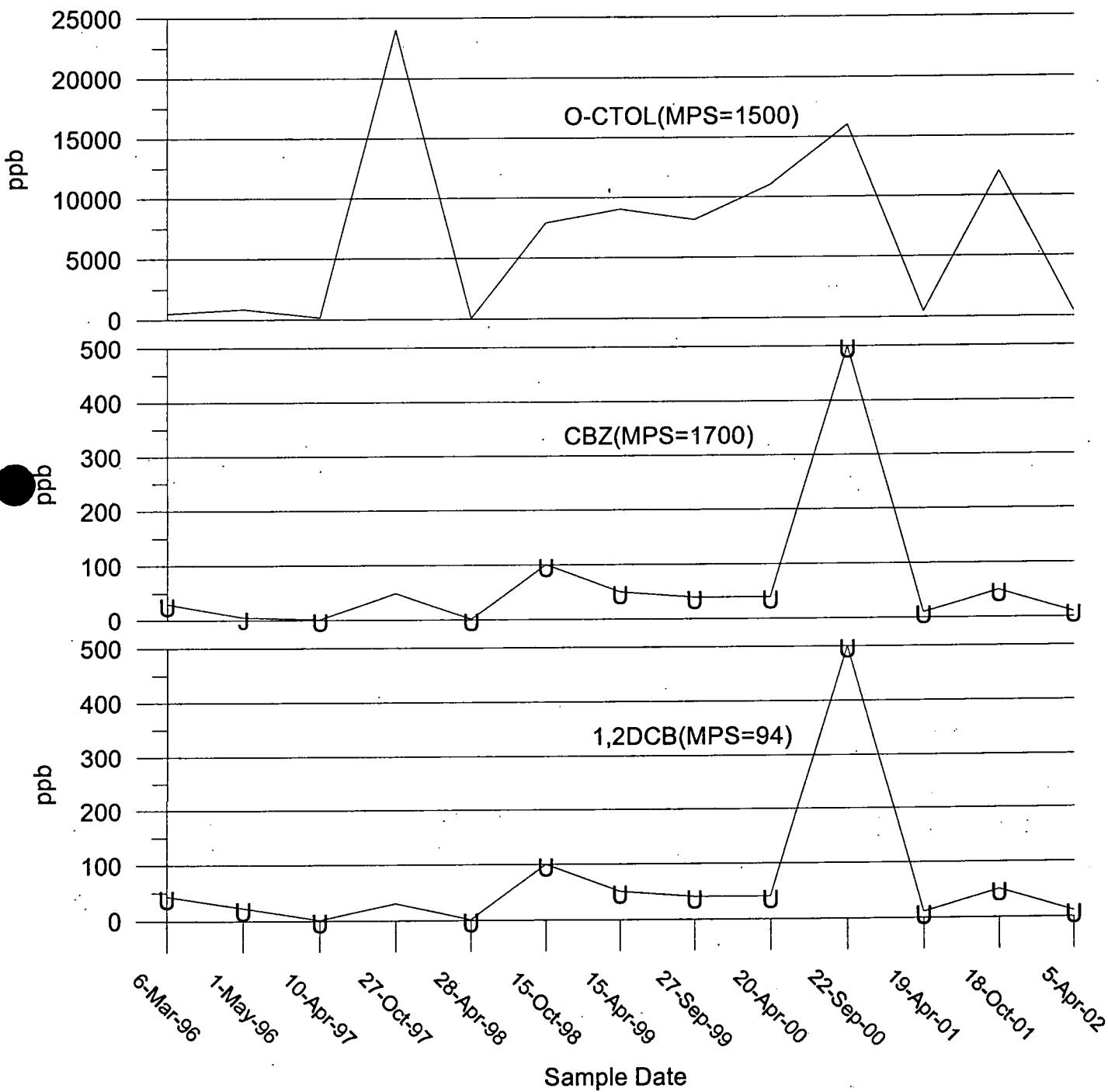
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MPS=Media Protection Std.



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Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well MW-021S
Upgradient Well

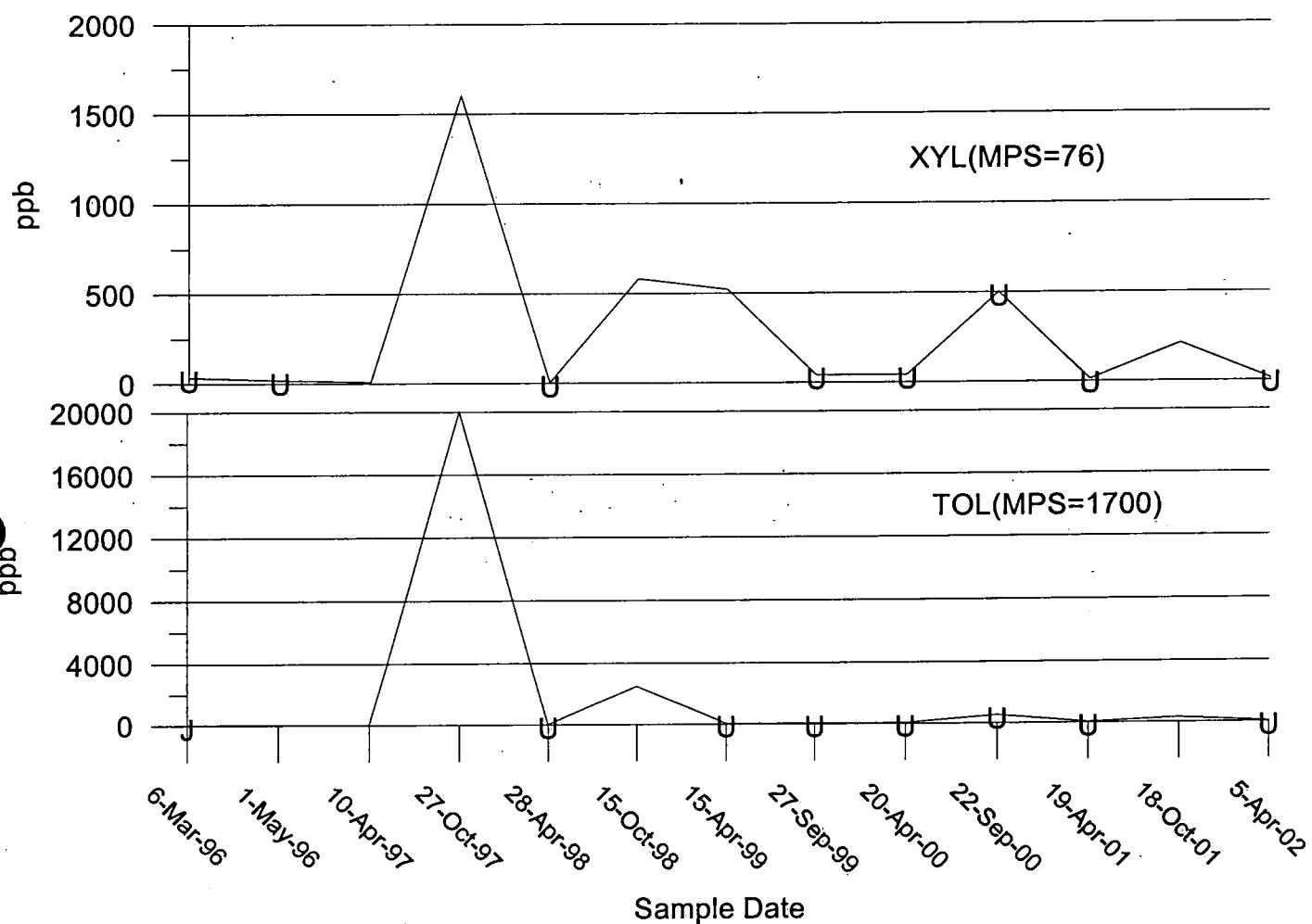
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MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semianual Monitoring

Well MW-021S
Upgradient Well

"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



APPENDIX D
TIME-SERIES GRAPHS
FOR
BULKHEAD WELLS

Table 4
BULKHEAD WELLS
Cumulative Results for Chemicals Of Concern
(Units in ppb)

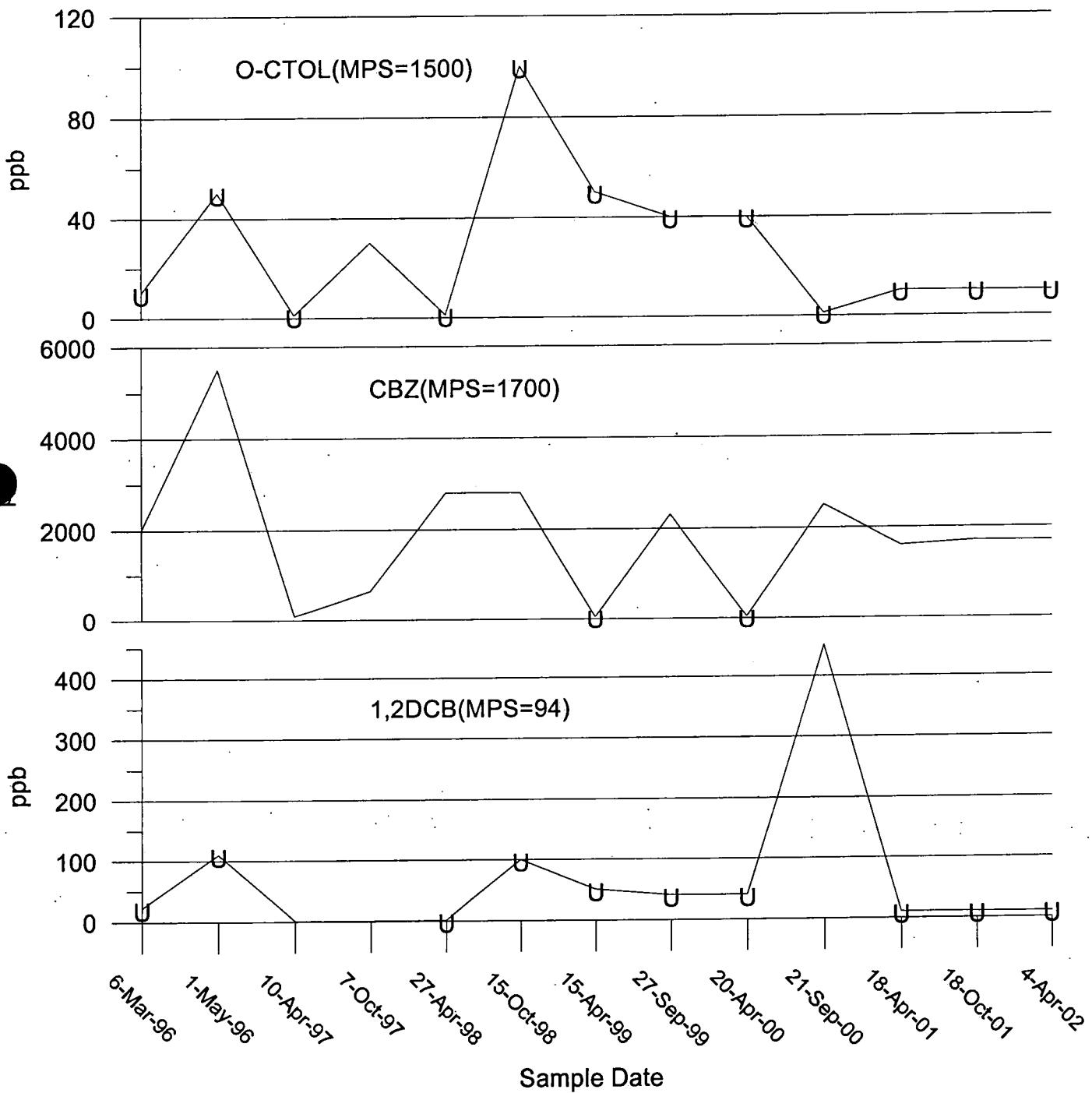
Well No.	Date Sampled	1,2-Dichloro-benzene	Chlorobenzene	o-Chlorotoluene	Toluene	Xylenes
MPS		94	1700	1500	1700	76
MW-001S	6-Mar-96	22 U	2000	10 U	16	18
MW-001S	1-May-96	110 U	5500	50 U	30 J	85 U
MW-001S	10-Apr-97	1	93	1 U	9	7
MW-001S	7-Oct-97	1	640	30	23	2
MW-001S	27-Apr-98	1 U	2800	1 U	1	2
MW-001S	15-Oct-98	100 U	2800	100 U	100 U	
MW-001S	15-Apr-99	50 U	50	50 U	50 U	50 U
MW-001S	27-Sep-99	40 U	2300	40 U	40 U	40 U
MW-001S	20-Apr-00	40 U	40 U	40 U	40 U	40 U
MW-001S	21-Sep-00	450	2500	1 U	1 U	1 U
MW-001S	18-Apr-01	10 U	1600	10 U	10 U	10 U
MW-001S	18-Oct-01	10 U	1700	10 U	10 U	10 U
MW-001S	4-Apr-02	10 U	1700	10 U	10 U	10 U
MW-002S	5-Mar-96	340	3200	50 U	200	85 U
MW-002S	30-Apr-96	44 J	2500	50 U	52 J	85 U
MW-002S	8-Apr-97	20	64	1 U	46	18
MW-002S	7-Oct-97	90	440	100	97	31
MW-002S	27-Apr-98	22	500	1 U	88	28
MW-002S	15-Oct-98	28	5200	1 U	92	34
MW-002S	15-Apr-99	140	2260	10 U	420	33
MW-002S	27-Sep-99	43	2800	40 U	40 U	40 U
MW-002S	20-Apr-00	1340	12000	150	830	120
MW-002S	21-Sep-00	930	9400	500 U	500 U	500 U
MW-002S	18-Apr-01	50 U	1400	50 U	95	50 U
MW-002S	18-Oct-01	1800	12000	170	120	33
MW-002S	5-Apr-02	360	4700	100 U	230	50 U
P-035S	8-Apr-97	22	74	1 U	4	12
P-035S	7-Oct-97	240	710	2	10	12
P-035S	27-Apr-98	42	360	1 U	2	10
P-035S	15-Oct-98	140	2100	10 U	130	80
P-035S	15-Apr-99	20	480	10 U	10 U	10 U
P-035S	27-Sep-99	40 U	40 U	40 U	40 U	40 U
P-035S	20-Apr-00	4580	77000	300	160	56
P-035S	21-Sep-00	6600	11000	500 U	500 U	500 U
P-035S	18-Apr-01	2000	2100	67	50 U	50 U
P-035S	18-Oct-01	9000	11000	310	81	34
P-035S	4-Apr-02	9600	8800	380	100 U	50 U
P-036S	6-Mar-96	22 U	440	10 U	14 U	17 U
P-036S	1-May-96	22 U	460	30	14 U	17 U
P-036S	8-Apr-97	1 U	72	1 U	1 U	2
P-036S	7-Oct-97	1 U	35	9	2	1 U
P-036S	27-Apr-98	1 U	260	1 U	1 U	1 U
P-036S	15-Oct-98	1 U	230	1 U	1 U	1
P-036S	15-Apr-99	10 U	200	10 U	10 U	10 U
P-036S	27-Sep-99	10 U	450	10 U	10 U	10 U
P-036S	20-Apr-00	1 U	290	1 U	1 U	1 U
P-036S	21-Sep-00	30 U	300	30 U	30 U	30 U
P-036S	18-Apr-01	10 U	280	10 U	10 U	10 U
P-036S	18-Oct-01	1 U	170	1 U	1 U	1 U
P-036S	4-Apr-02	1 U	230	1 U	1	1 U
P-037S	9-Apr-97	2 U	54	16	1 U	1
P-037S	8-Oct-97	2	50	13	1 U	1 U
P-037S	28-Apr-98	2	420	8	1 U	1 U
P-037S	15-Oct-98	30 U	540	30 U	30 U	30 U
P-037S	15-Apr-99	10 U	210	10 U	10 U	10 U
P-037S	27-Sep-99	10 U	660	10 U	10 U	10 U
P-037S	20-Apr-00	1 U	460	5	1 U	1 U
P-037S	21-Sep-00	30 U	370	30 U	30 U	30 U
P-037S	18-Apr-01	10 U	330	10 U	10 U	10 U
P-037S	18-Oct-01	2	240	1 U	1 U	1 U
P-037S	4-Apr-02	10 U	360	10 U	10 U	10 U
P-038S	6-Mar-96	4.3 U	2.4 J	2 U	1.3 J	3.4 U
P-038S	1-May-96	4.3 U	1.2 J	2 U	2.8 U	3.4 U
P-038S	9-Apr-97	1 U	1 U	1 U	1 U	1 U
P-038S	8-Oct-97	1 U	1 U	1 U	1 U	1 U
P-038S	28-Apr-98	1 U	1 U	1 U	1 U	1 U
P-038S	15-Oct-98	1 U	2	1 U	1 U	1 U
P-038S	15-Apr-99	1 U	1 U	1 U	1 U	1 U
P-038S	27-Sep-99	1 U	1	1 U	1 U	1 U
P-038S	20-Apr-00	1 U	1 U	1 U	1 U	1 U
P-038S	21-Sep-00	1 U	1	1 U	1 U	1 U
P-038S	18-Apr-01	1 U	1 U	1 U	1 U	1 U
P-038S	18-Oct-01	1 U	6	1 U	1 U	1 U
P-038S	4-Apr-02	1 U	2	1 U	1 U	1 U

MPS = Media Protection Standard
U = Nondetect with detection limit given
J = Estimated value

Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well MW-001S
Along Bulkhead

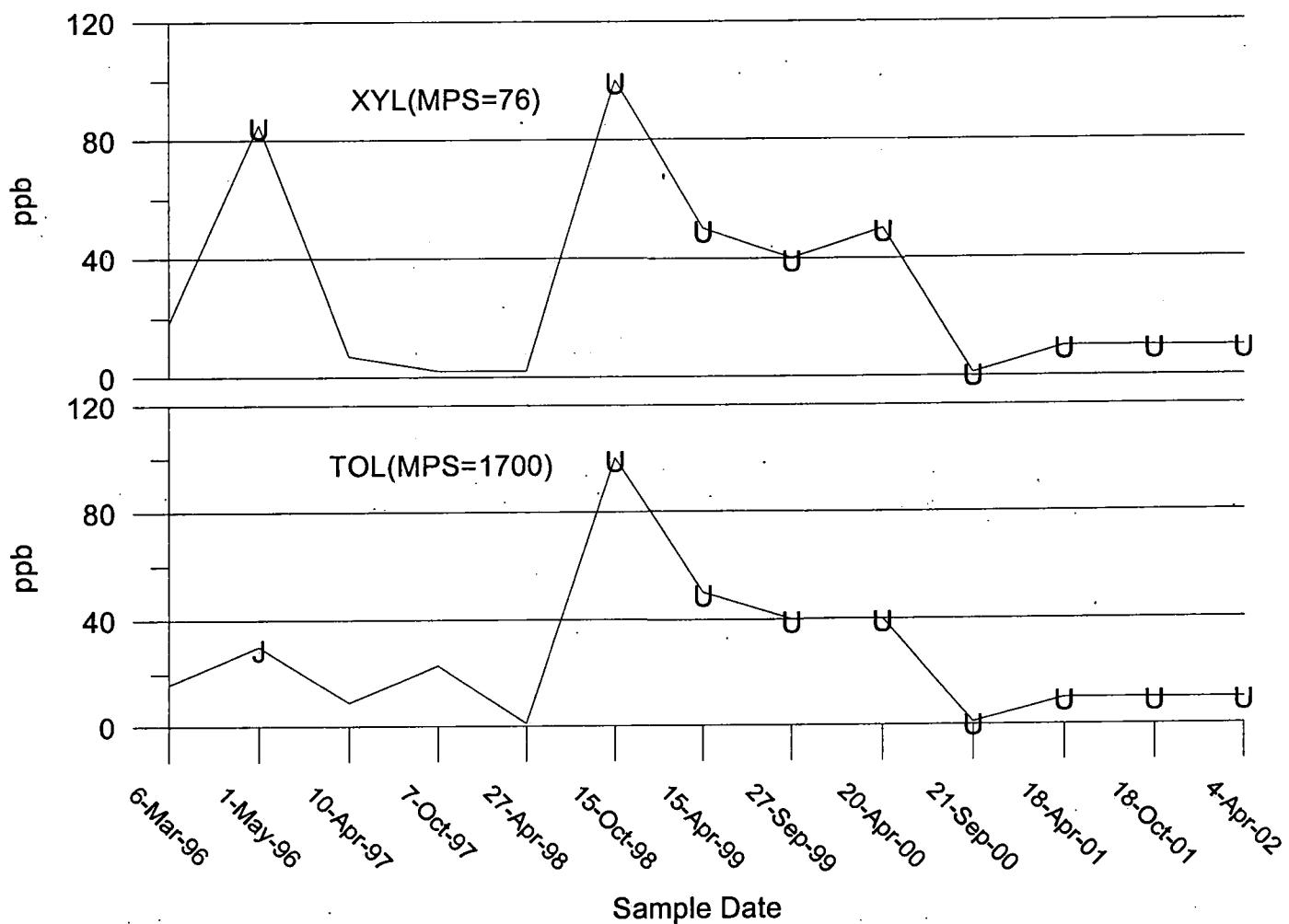
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well MW-001S
Along Bulkhead

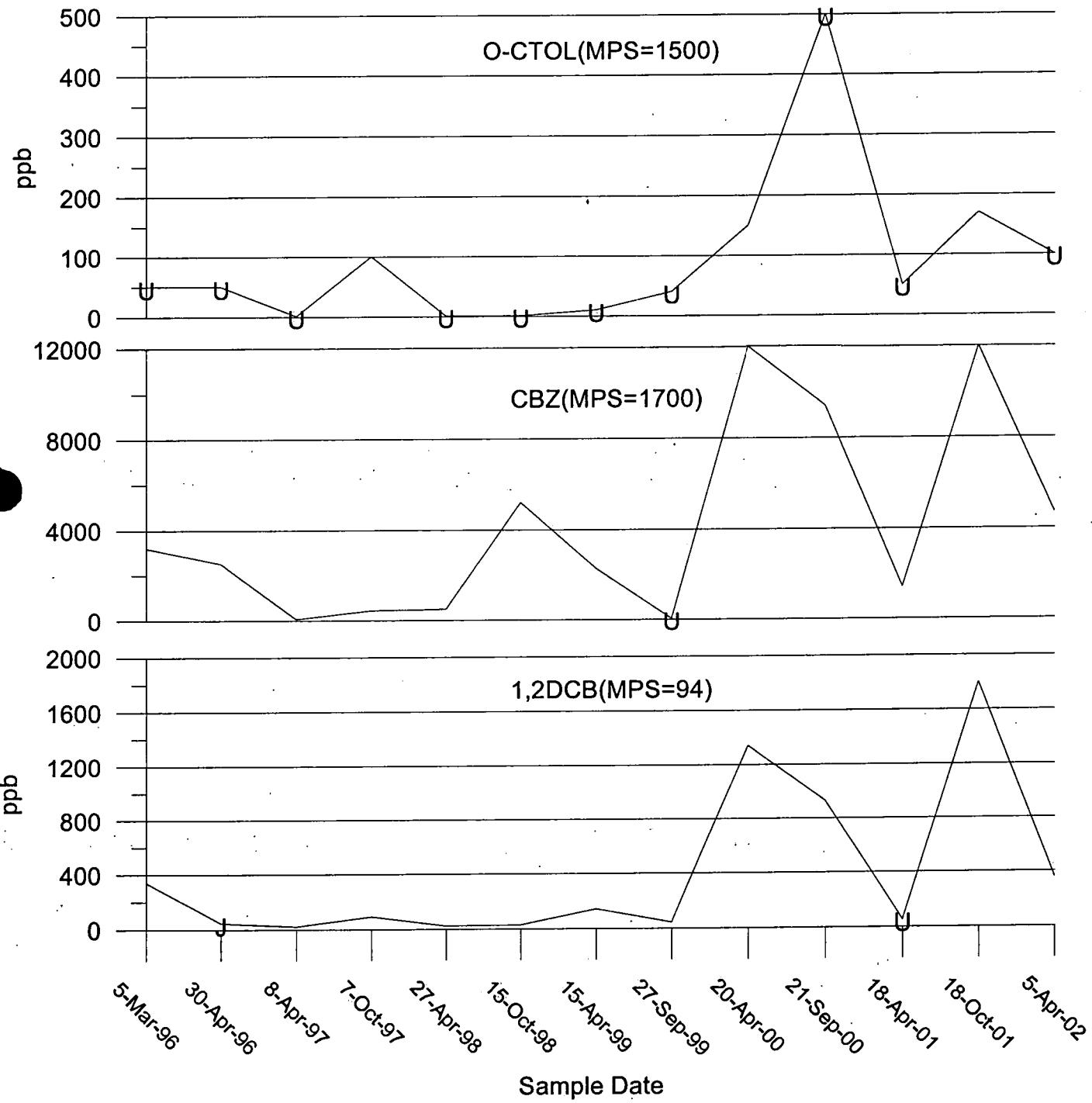
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well MW-002S
Along Bulkhead

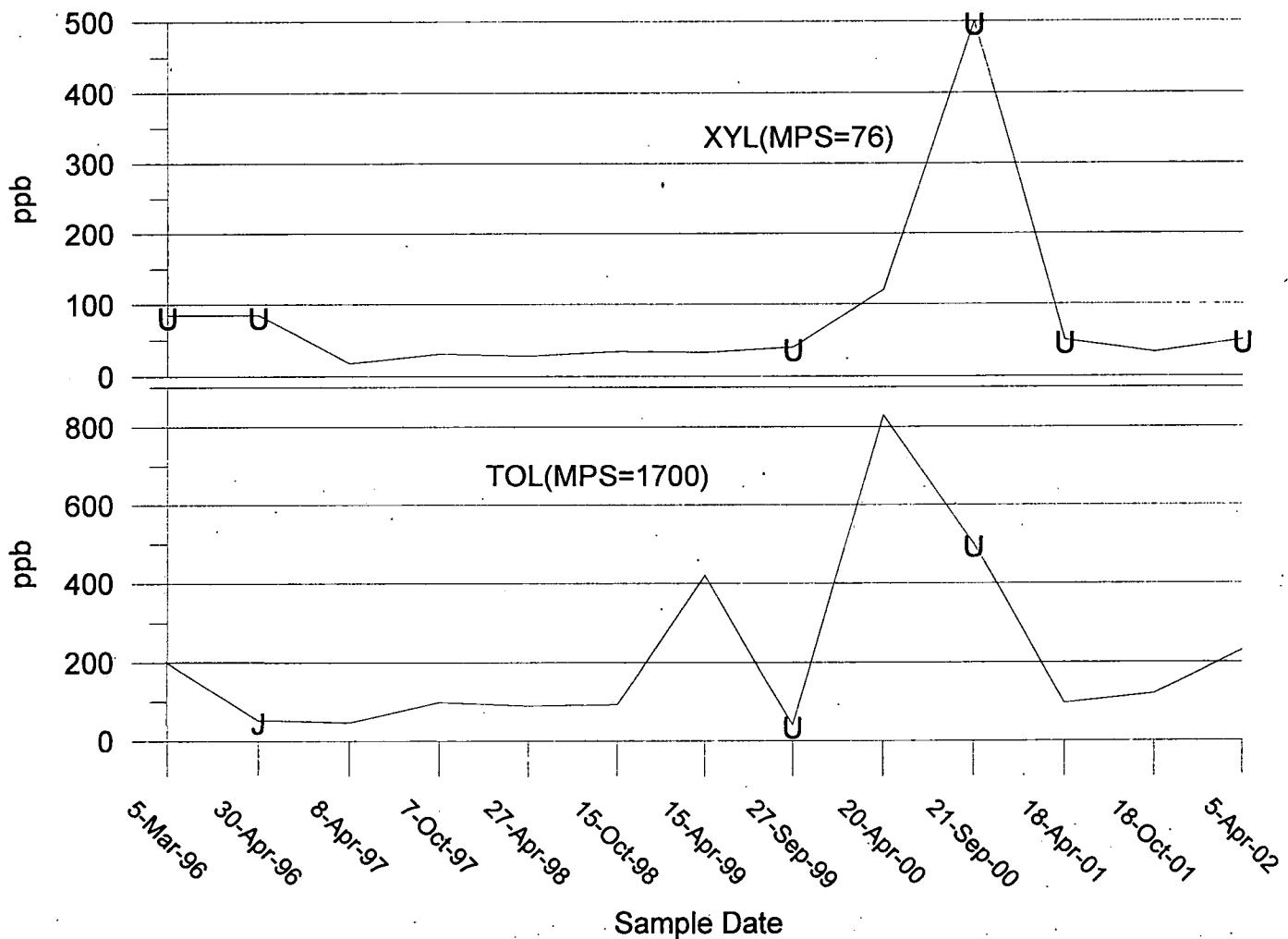
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"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semianual Monitoring

Well MW-002S
Along Bulkhead

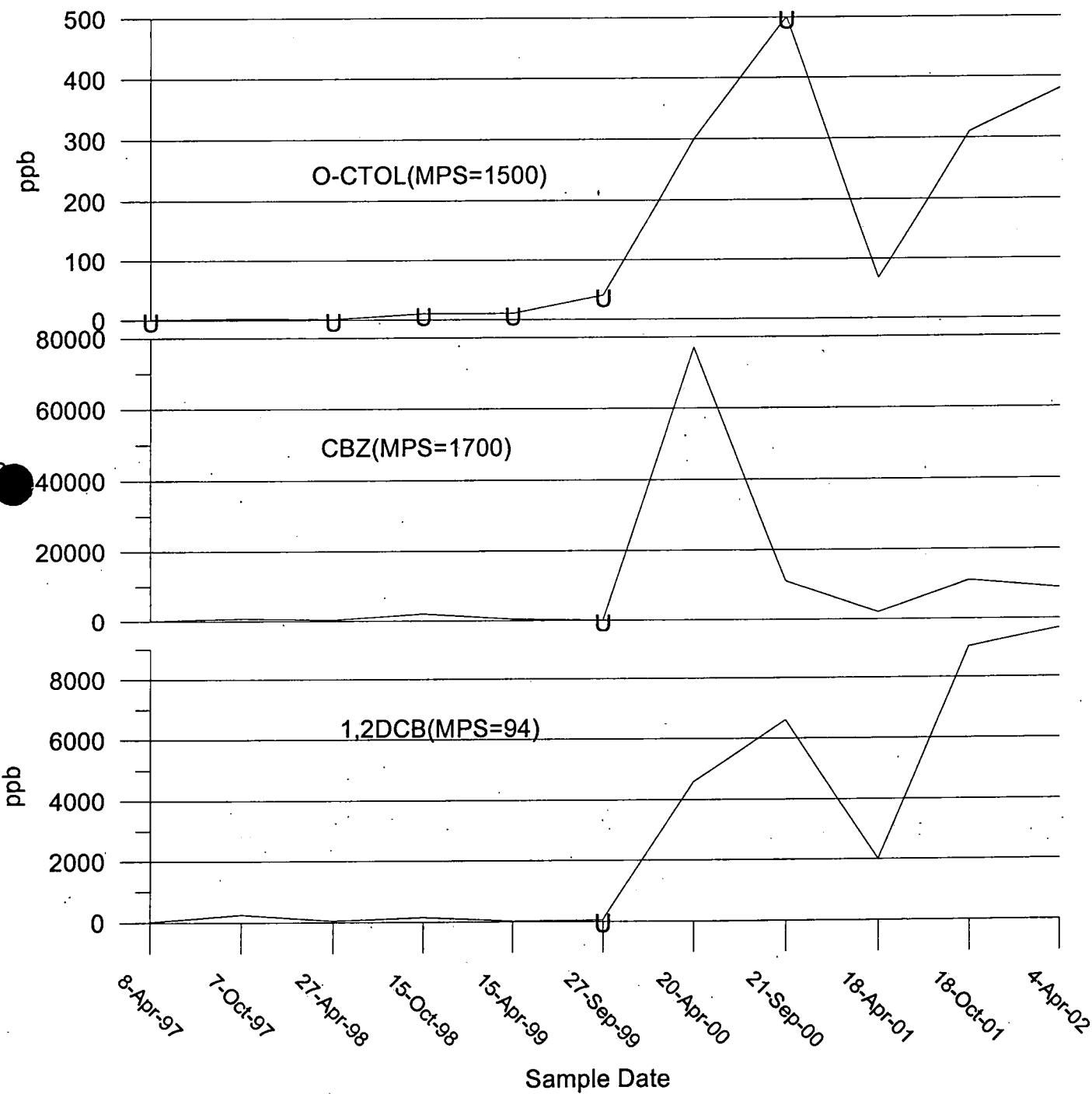
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"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well P-035S
Along Bulkhead

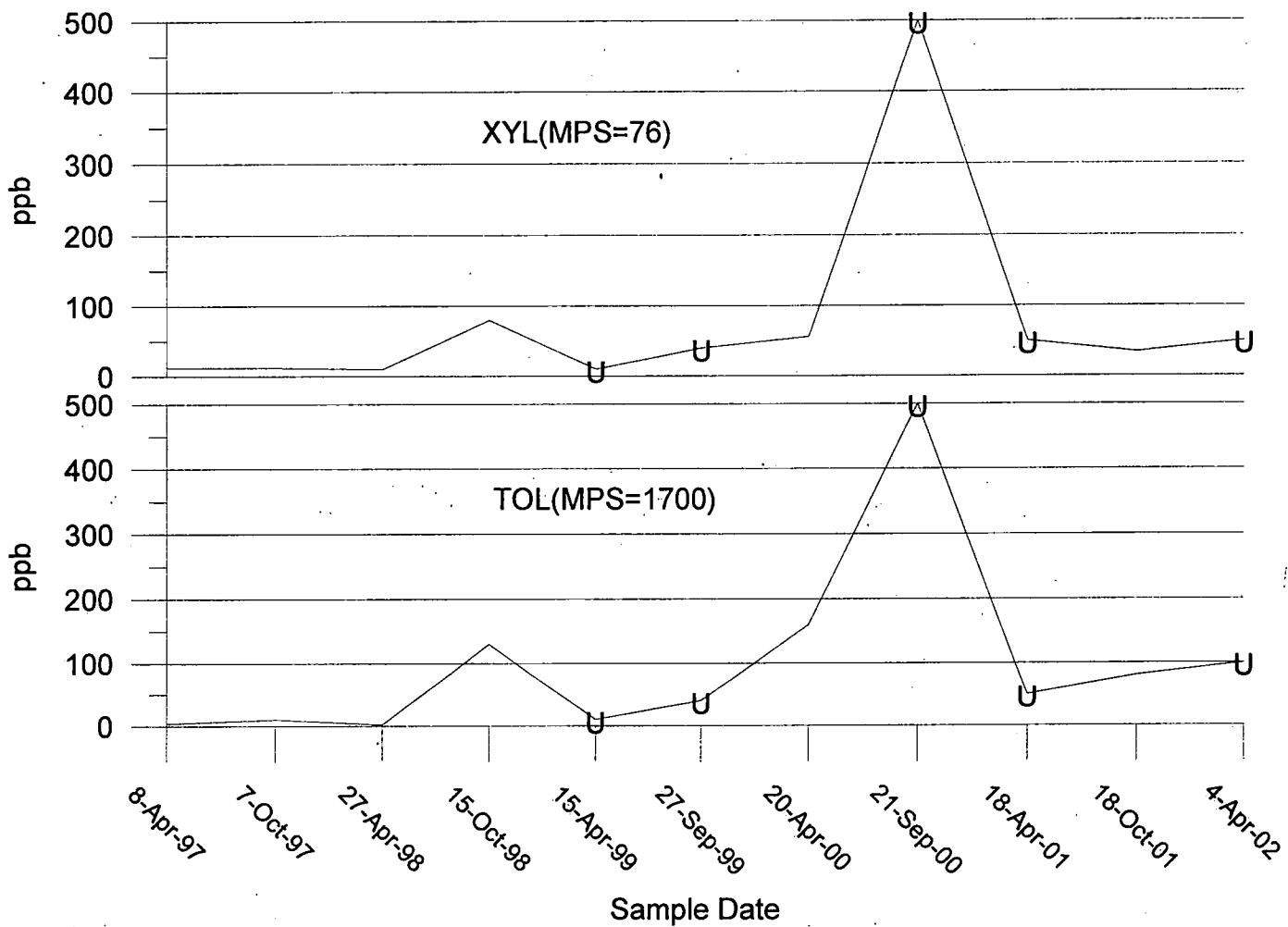
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well P-035S
Along Bulkhead

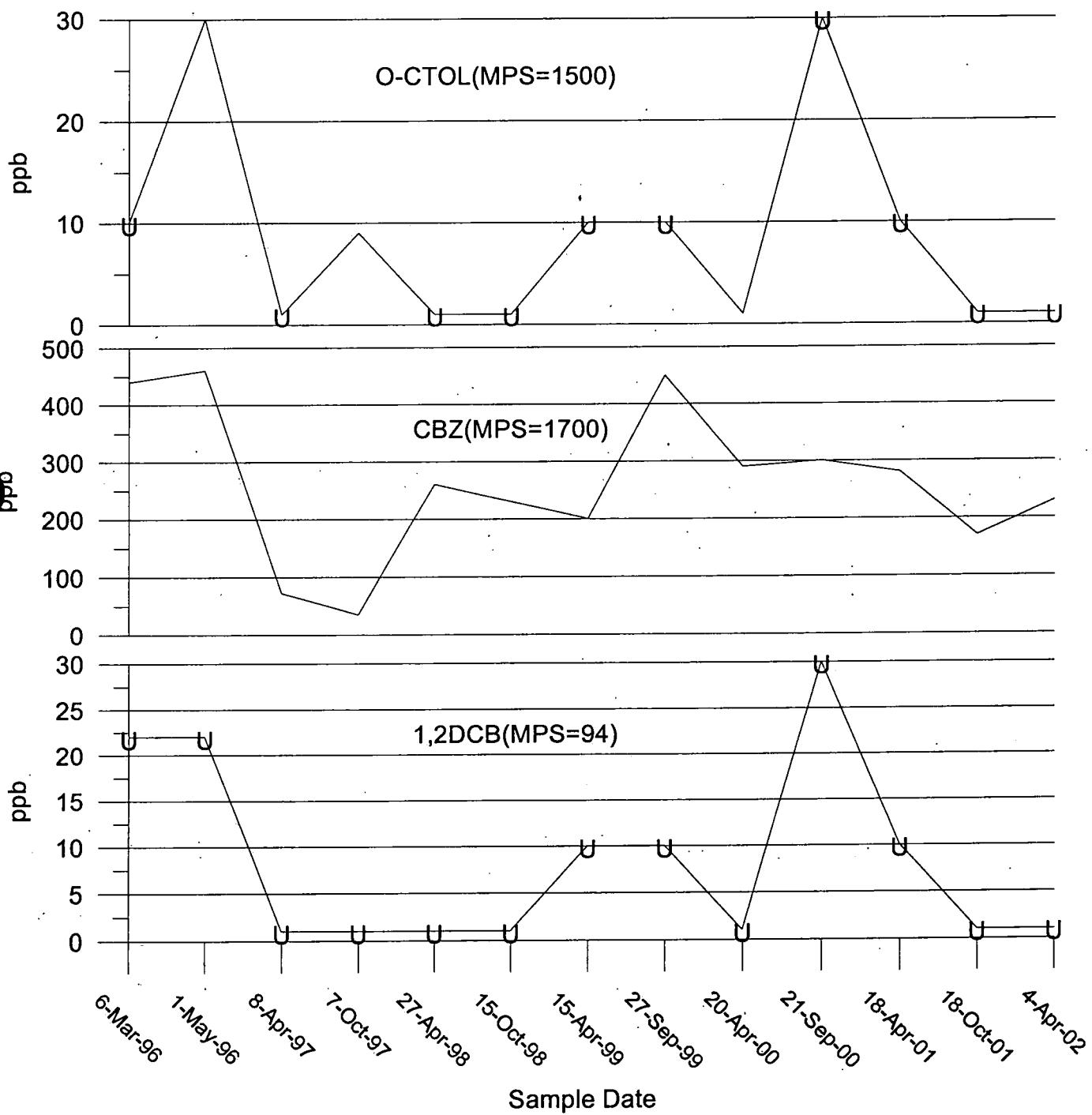
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"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well P-036S
Along Bulkhead

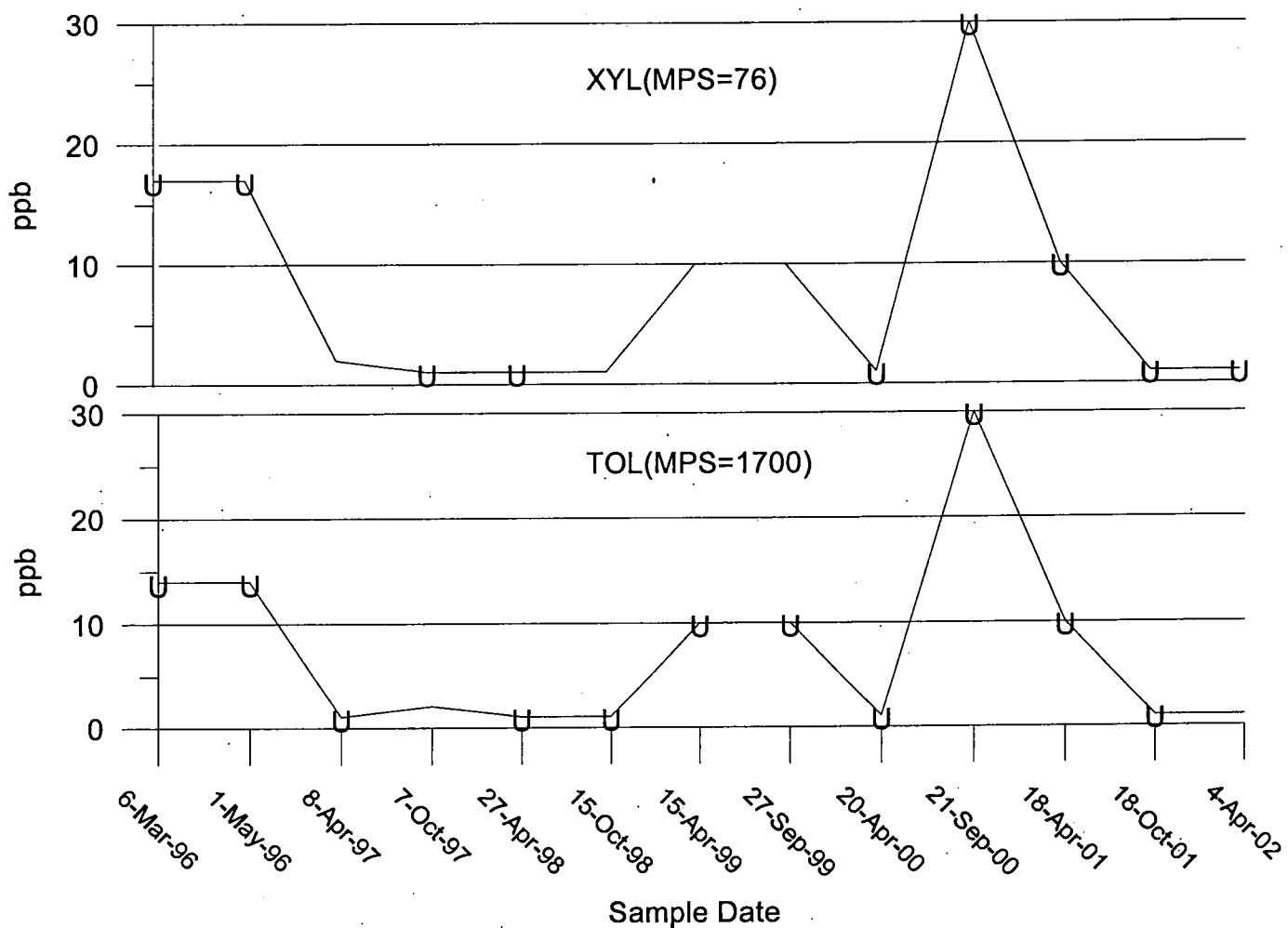
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MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well P-036S
Along Bulkhead

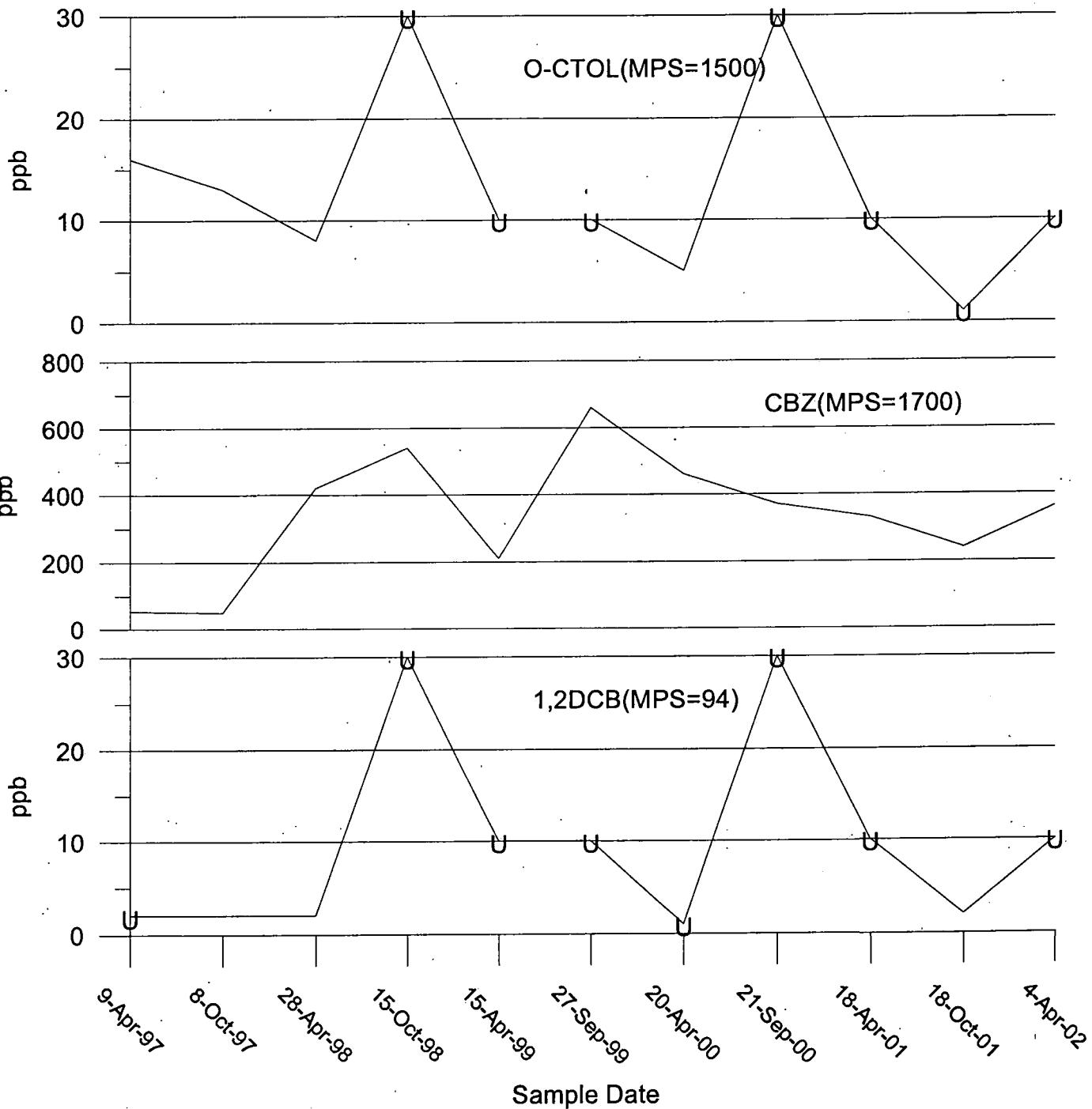
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well P-037S
Along Bulkhead

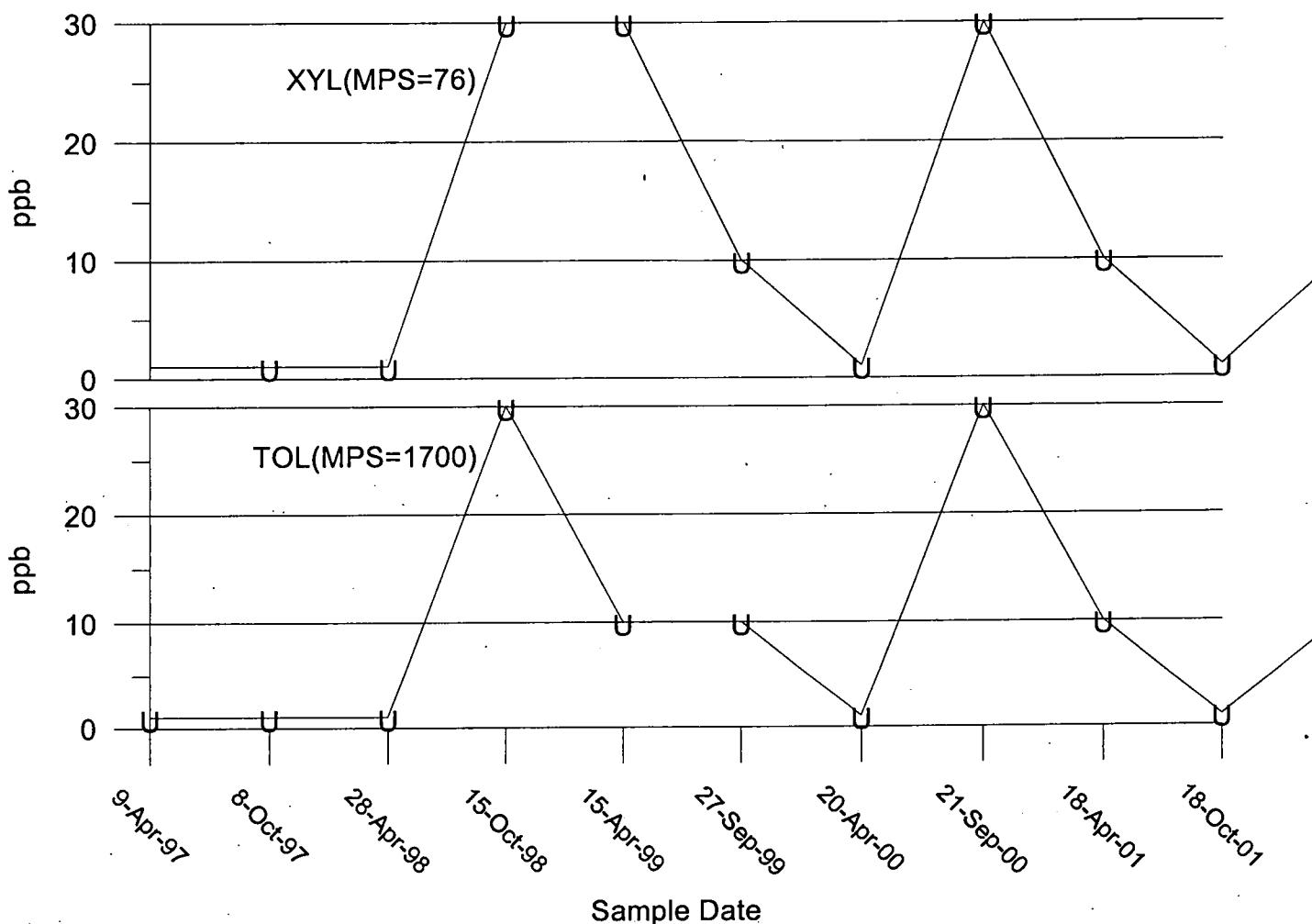
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well P-037S
Along Bulkhead

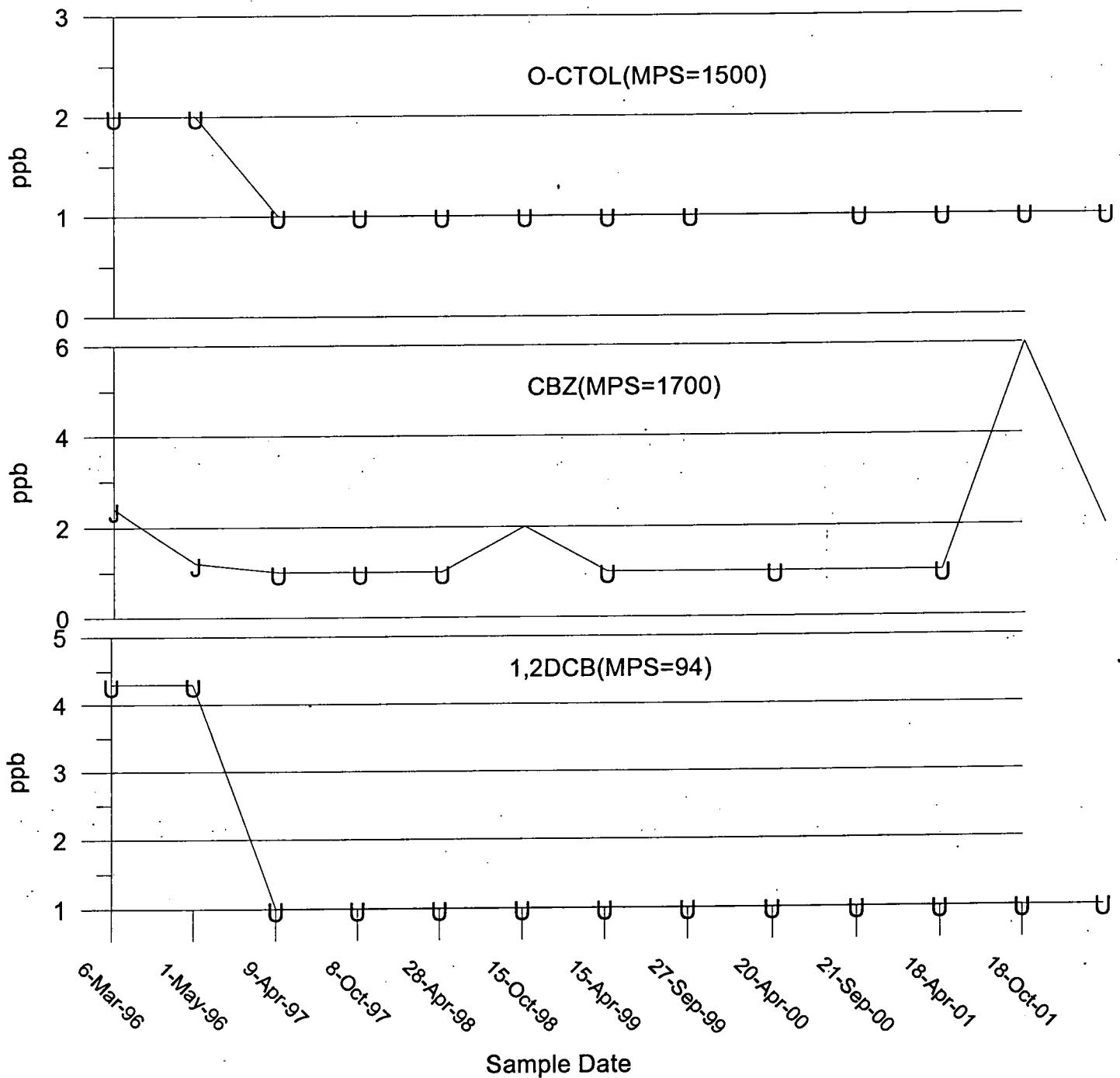
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semianual Monitoring

Well P-038S
Along Bulkhead

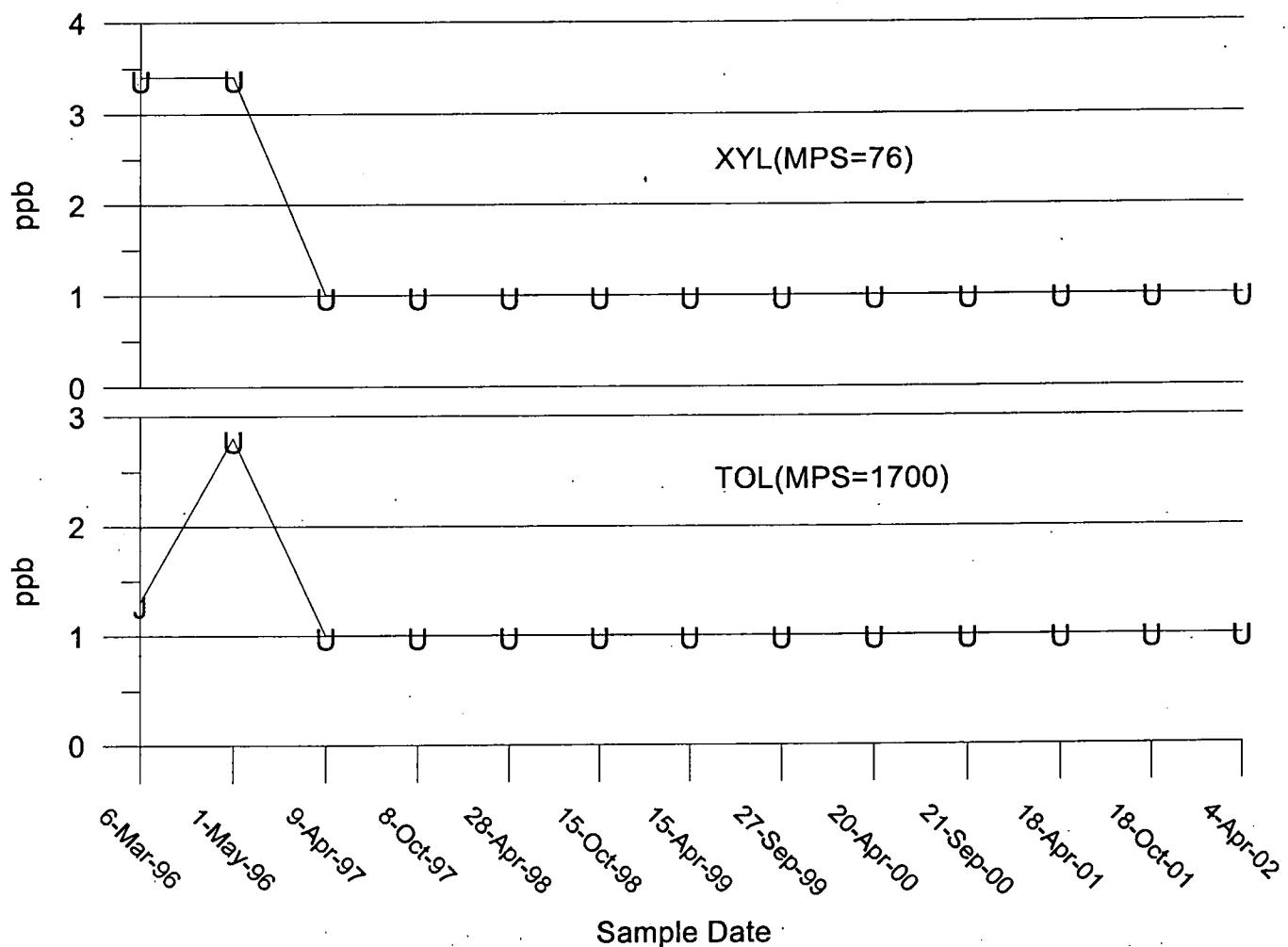
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp.
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well P-038S
Along Bulkhead

"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



APPENDIX E
TIME-SERIES GRAPHS
FOR
IN-RIVER WELLS

Table 5
IN-RIVER WELLS
Cumulative Results for Chemicals Of Concern
(Units in ppb)

Well No.	Date Sampled	1,2-Dichloro-benzene	Chloro-benzene	o-Chloro-toluene	Toluene	Xylenes
MPS		94	1700	1500	1700	76
SW-110	6-Mar-96	54	1600	55	460	34 U
SW-110	2-May-96	63 J	1600	40 U	220	68 U
SW-110	10-Apr-97	23	110	1	62	8
SW-110	8-Oct-97	1 U	1 U	1 U	1 U	1 U
SW-110	27-Apr-98	21	1100	2	170	6
SW-110	15-Oct-98	100 U	440	100 U	100 U	100 U
SW-110	15-Apr-99	50 U	670	50 U	50 U	50 U
SW-110	27-Sep-99	40 U	2500	40 U	220	40 U
SW-110	20-Apr-00	47	20 U	91	380	20 U
SW-110	21-Sep-00	100 U	2000	100 U	820	100 U
SW-110	18-Apr-01	1 U	3	1 U	1 U	1 U
SW-110	18-Oct-01	1 U	2	1 U	1 U	1 U
SW-110	4-Apr-02	1 U	2	1 U	1 U	1 U
SW-120	5-Mar-96	4.3 U	63	2 U	2.8 U	3.4 U
SW-120	30-Apr-96	4.3 U	70	2 U	2.8 U	3.4 U
SW-120	8-Apr-97	1 U	43	1 U	1 U	1 U
SW-120	7-Oct-97	1	39	39	31	2
SW-120	27-Apr-98	1 U	54	1 U	1 U	1 U
SW-120	15-Oct-98	1 U	36	1 U	1 U	1 U
SW-120	15-Apr-99	10 U	92	10 U	10 U	10 U
SW-120	27-Sep-99	10 U	68	10 U	10 U	10 U
SW-120	20-Apr-00	1 U	67	1 U	1 U	1 U
SW-120	21-Sep-00	9100	1800	500 U	500 U	500 U
SW-120	18-Apr-01	1 U	58	1 U	1 U	1 U
SW-120	18-Oct-01	2	54	1 U	1 U	1 U
SW-120	5-Apr-02	1 U	39	1 U	1 U	1 U
SW-130	6-Mar-96	4.3 U	3 U	6.5	2.8 U	3.4 U
SW-130	1-May-96	4.3 U	3 U	12	2.8 U	3.4 U
SW-130	9-Apr-97	1 U	1	12	1 U	1 U
SW-130	7-Oct-97	1 U	1 U	2	1 U	1 U
SW-130	27-Apr-98	1 U	27	14	1 U	1 U
SW-130	15-Oct-98	1 U	1 U	1	1 U	1 U
SW-130	15-Apr-99	1 U	5	5	1 U	1 U
SW-130	27-Sep-99	1 U	1	2	1 U	1 U
SW-130	20-Apr-00	1	10	30	1 U	1
SW-130	21-Sep-00	5 U	5 U	5 U	5 U	5 U
SW-130	19-Apr-01	1 U	1 U	1 U	1 U	1 U
SW-130	18-Oct-01	1 U	12	1 U	1 U	1 U
SW-130	4-Apr-02	1 U	1 U	1 U	1 U	1 U

MPS = Media Protection Standard

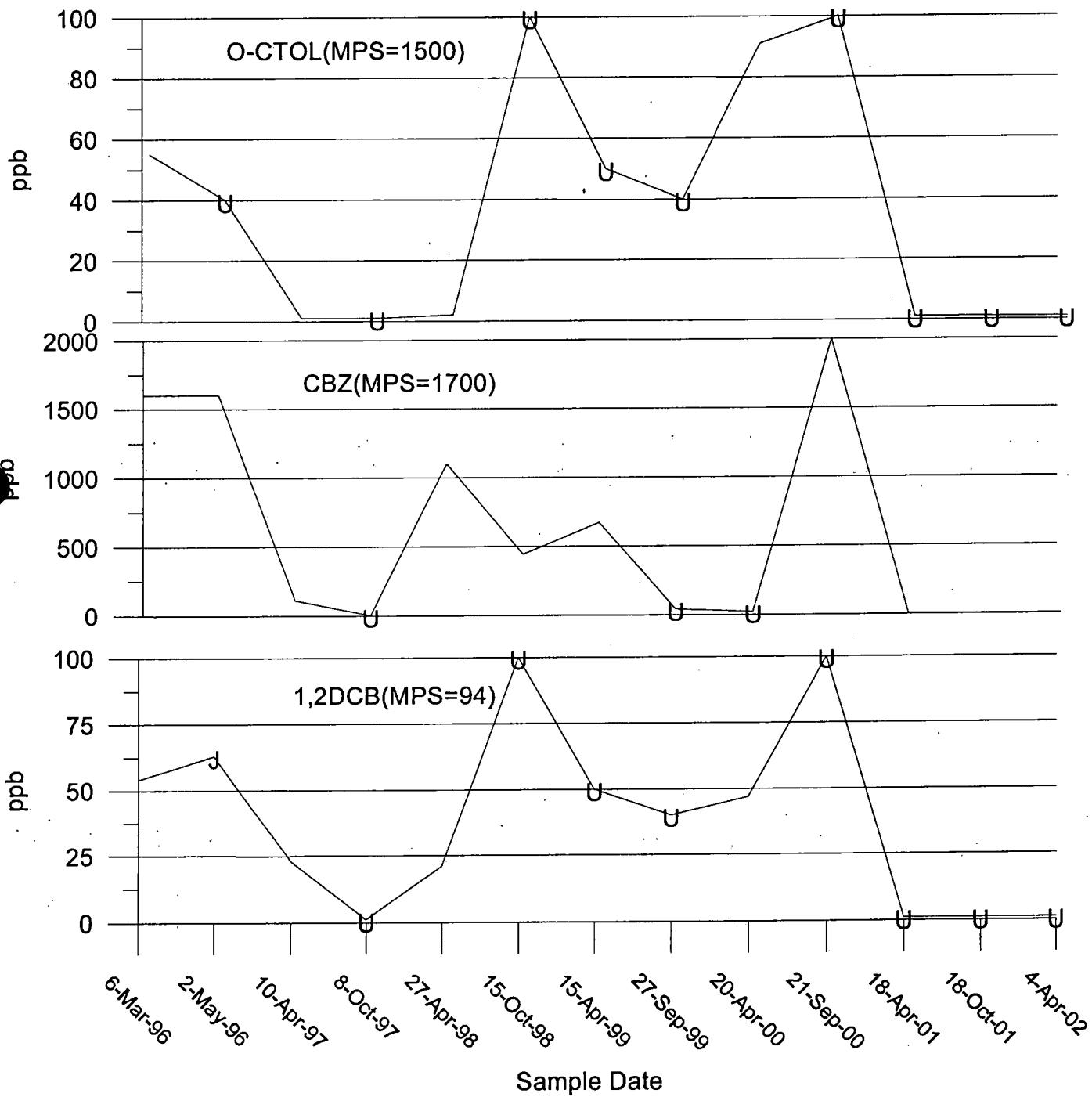
U = Nondetect with detection limit given

J = Estimated value

Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well SW-110
In-River Wells

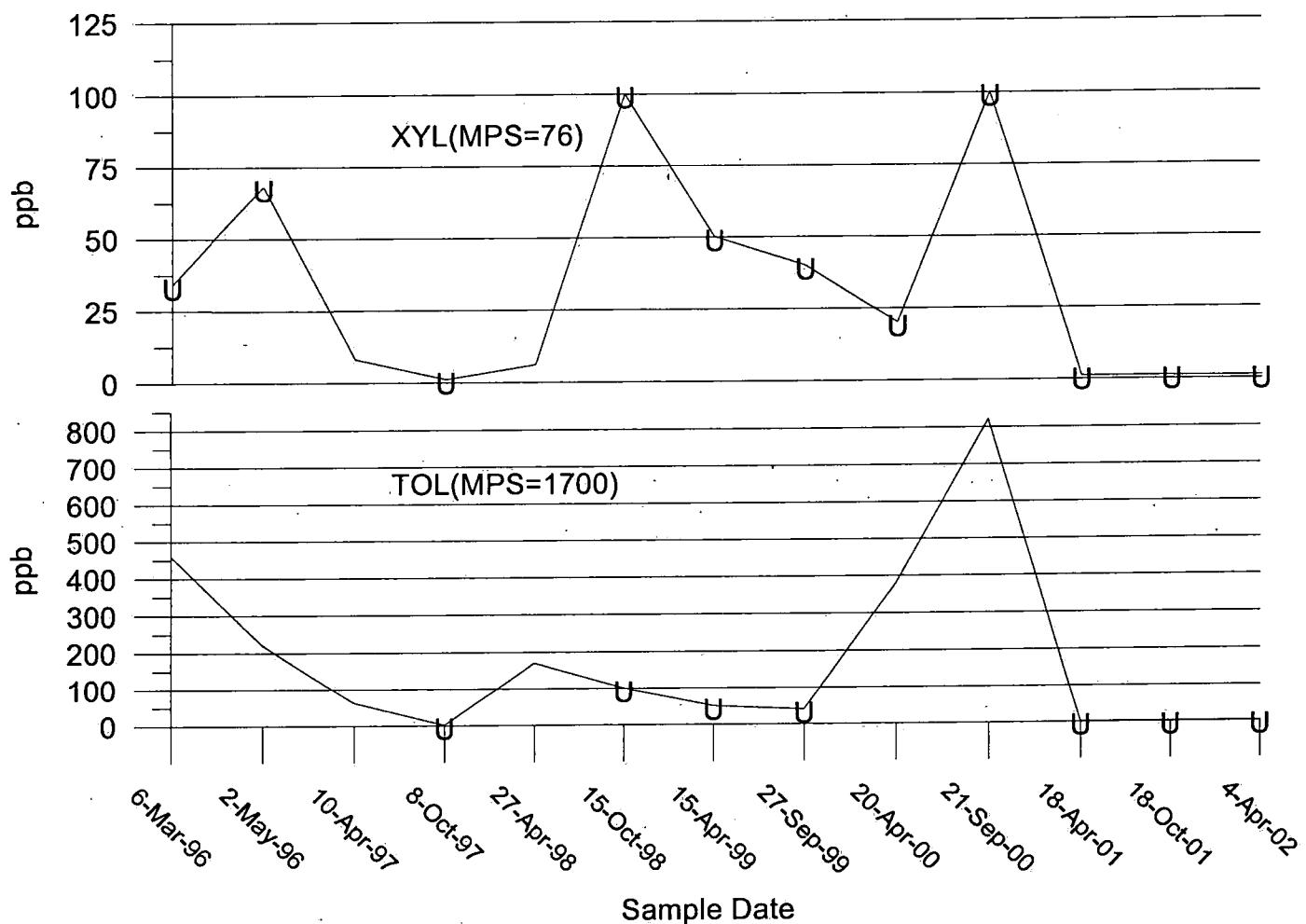
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well SW-110
In-River Well

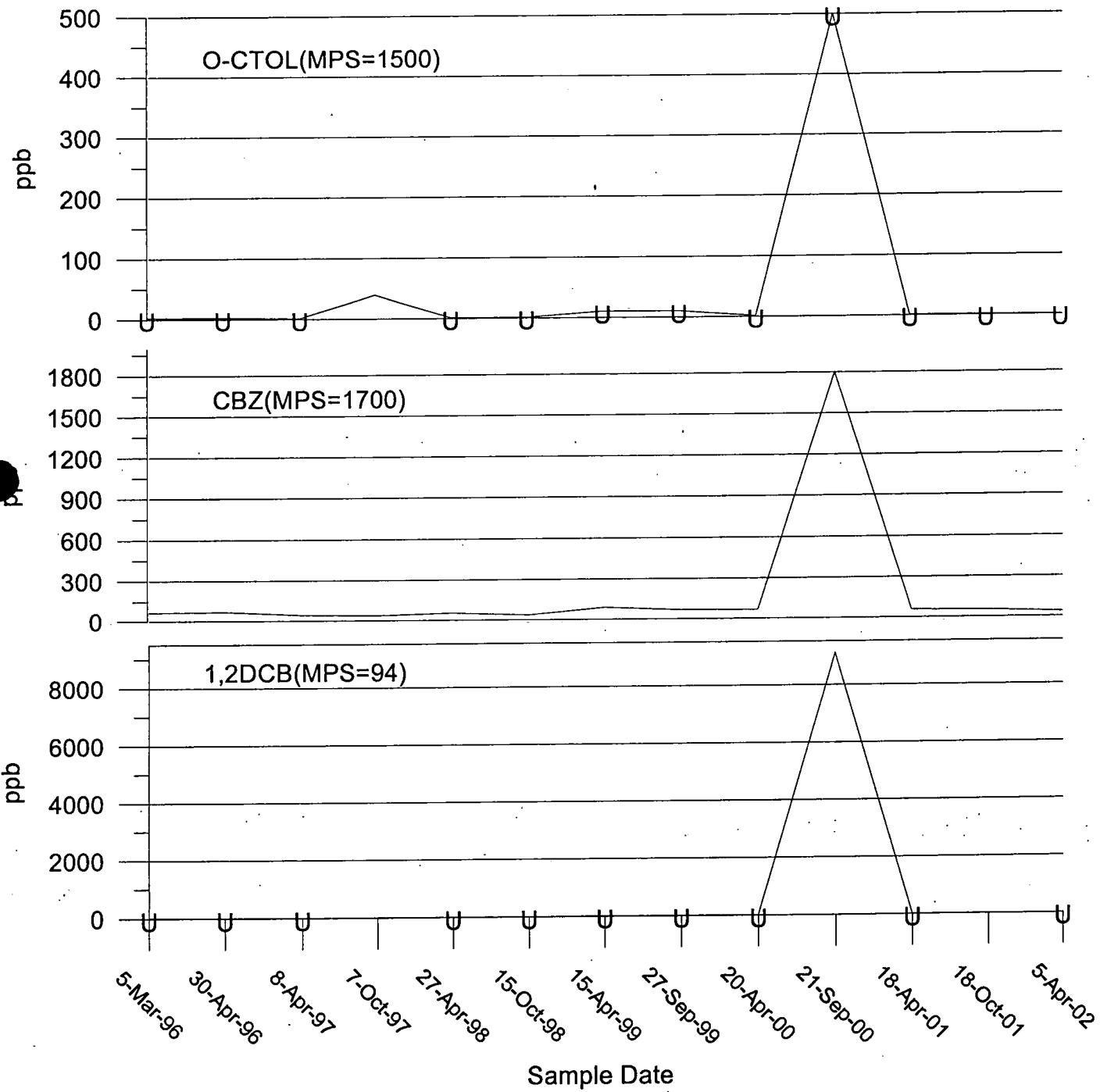
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"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well SW-120
In-River Well

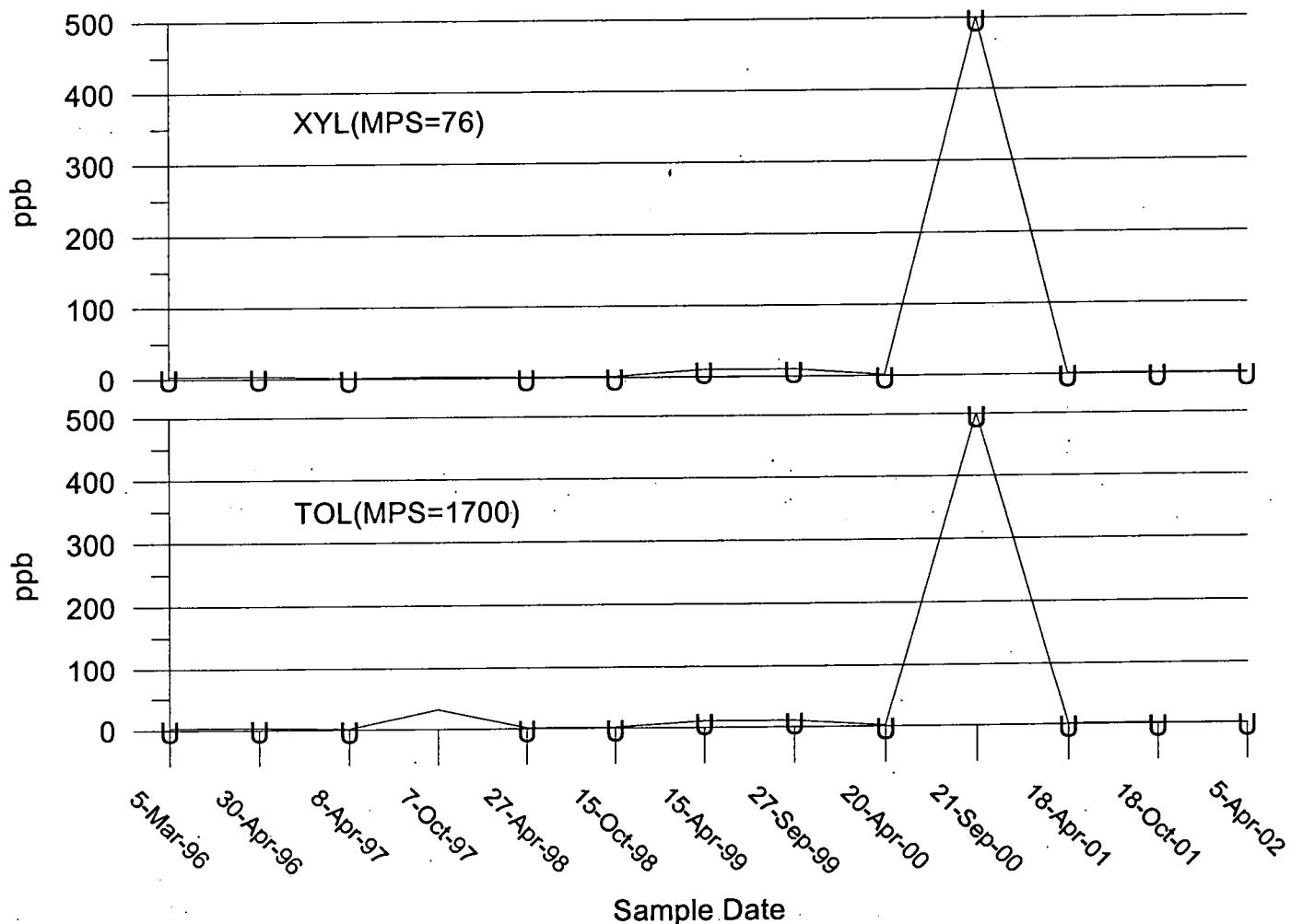
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"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well SW-120
In-River Well

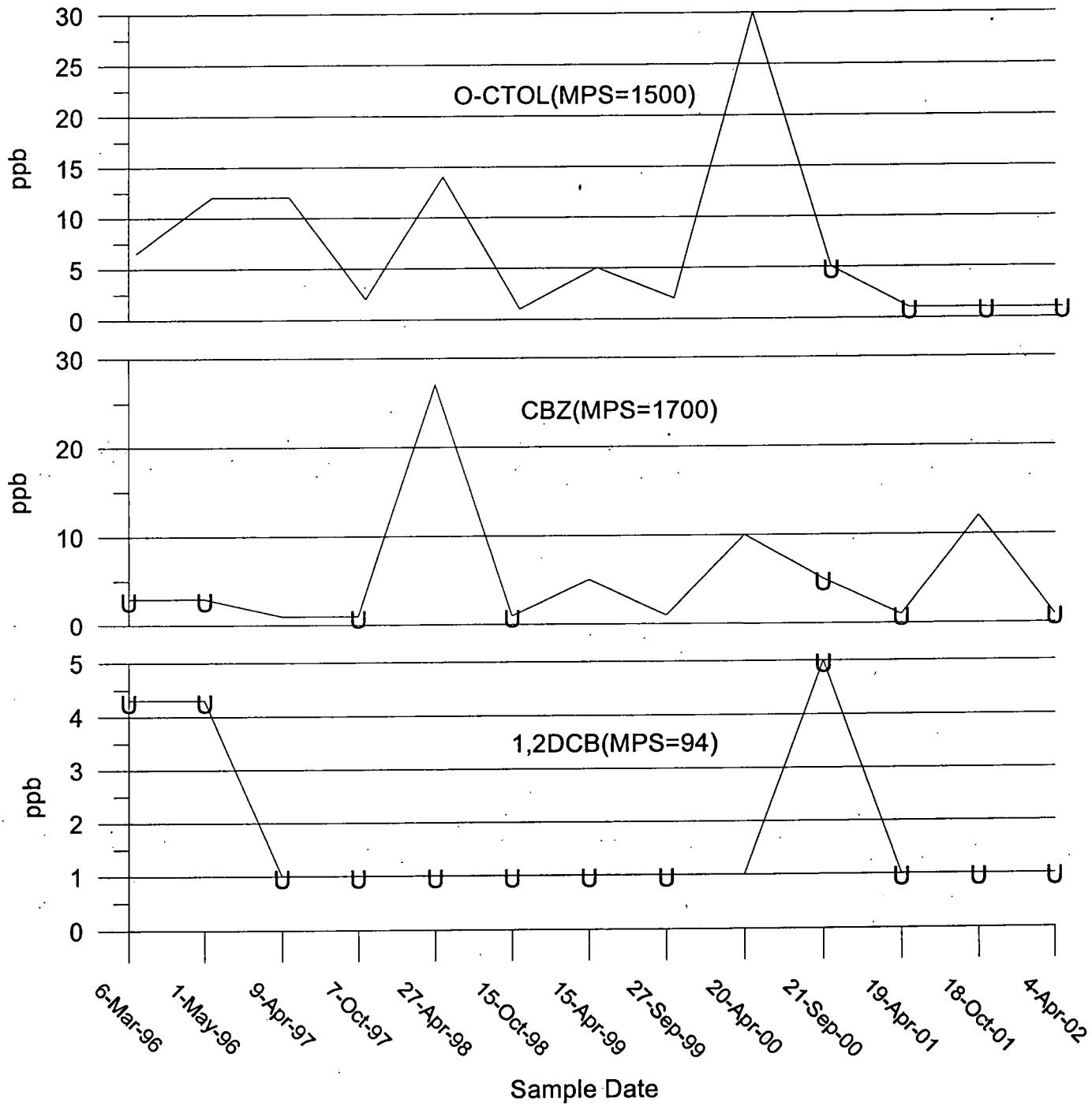
"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well SW-130
In-River Well

"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection Std.



Ciba Specialty Chemicals Corp
Cranston Rhode Island Facility
Time-Series Graph
Semiannual Monitoring

Well SW-130
In-River Well

"U"=Nondetect
"J"=Estimated Value
MPS=Media Protection S

